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## Experiences from Many Years' Fight Against Bovine Tuberculosis.

**By Professor B. Bang, M.D., Formerly Chief of the Civil Veterinary Service in Denmark.**

In the course of the last year British veterinarians have discussed with great interest the best ways of combating tuberculosis in cattle. It is natural that you, in the first line, have been inclined to adopt the *American* plan (the *accredited herd* plan and the *area* plan) which has been so admirably organised and consequently so effective in U.S.A. and in Canada. But it is a very expensive plan (the yearly cost in U.S.A. is about 20 million dollars) and in *Great Britain*, where tuberculosis in cattle is much more widespread, the compensation for slaughter of all reacting animals would amount to such an enormous sum that it cannot be expected that the Government will recommend such a measure. It must, therefore, be considered if it is really necessary, in order to eradicate tuberculosis from an infected herd, to slaughter all reacting animals in such a herd, even if they do not show the slightest symptoms of the disease except the reaction. A great number of such cows will never be effected in such a degree that their milk is apt to contain tubercle bacilli, and if the animal in question is a good pedigreed cow, she might every year bring forth a healthy calf, perhaps of still greater value.

I, therefore, think it a rational method—I recommended it 38 years ago in *Denmark* (and two years later at the International Congress for Hygiene and Demography at Budapest)—to kill as soon as possible only the animals which show symptoms of tuberculosis, and allow to live all such as, only by reaction at a tuberculin test, are found to be infected but which else do not show any symptom of clinical tuberculosis. At the same time, my method was based on the fact that the *immense majority of calves are born healthy*, even if both the cow and the bull are infected and, therefore, react to a tuberculin test. If you protect such calves against infection by soon removing them from the infected cowshed and by preventing their infection through the milk, the calves will remain healthy. These *simple prophylactic measures are enough to breed a completely healthy herd out of a badly infected one*, and that can be done in the course of some few years, if the owner fully understands the nature of the disease and its means of propagation. The first day the calf must have its mother's colostrum, and it may be best also to give it the second day, but later the calf can very well thrive on sweet milk that is boiled or heated sufficiently to kill tubercle bacilli (80 degrees centigrade). If the owner has absolutely tubercle-free cows, he may, of course, use their milk raw, and if he fears to adopt the so-called " artificial feeding " (which is commonly used in Denmark), he may, of course, take the risk of continuing a little longer to give the mother's raw milk. He may even permit the calf to suck the mother a short time, on the condition that the calf is only admitted to the cow during the suckling and is otherwise kept strictly separated. This breaking away from the isolation rule involves, of course, some risk of infection; there is, however, a great difference between such a brief exposure to infection and constant cohabitation in the same stable, day and night. You must, of course, take care that no tuberculous animals (cattle, swine or poultry) are admitted to the rooms or pens where the calves live and that the implements used in their tending do not carry tubercle bacilli. The attendant himself should take care not to carry infecting material on his shoes and overalls.

Isolation of the calves is, as a rule, a very simple measure that can be done at a very little expense, at least in the beginning. The room must be clean and have plenty of fresh air, but calves and heifers do not otherwise need finely constructed stables. It is true that the isolation of calves should be the beginning of a permanent separation between a new healthy herd and the old infected one; it will, therefore, often be necessary later on to enlarge the isolation shed. The old infected herd will, in the meanwhile, gradually diminish, and after some years the young herd may, on smaller farms, outnumber the old and may then possibly be transferred to the cowshed which must, of course, be very carefully cleaned and disinfected beforehand. If the owner still wants to keep some very good older animals, he may put them in the shed hitherto used for the healthy animals. It may then be necessary to improve this shed before it is used for milch cows. The young herd must be tested with tuberculin every year, or at first it is even better to test twice a year, in order *soon* to remove the very few animals which might be infected in spite of the isolation. As a rule, there will be no reaction at all.

The *formation of a new healthy herd* by isolating the calves and young animals was the capital point in my method to eradicate tuberculosis from an infected herd. But when, 38 years ago, I began the work in Denmark, I very naturally got the idea that I *might shorten the method* by testing the whole herd with tuberculin and isolating together with the calves the adult animals which did not react, and which, of course, did not otherwise seem suspect. In that way, the new healthy herd would be much larger in the beginning, and I hoped that by very careful isolation of the non-reacting animals from the reacting ones it would be possible to keep them free from tuberculosis. I saw, of course, that there would be not a little danger of contaminating the non-reacting animals, especially when they were kept at the same farm as the old infected herd. I therefore resolved that the healthy division should be retested with tuberculin once or, even better, twice a year in order, as soon as possible, to remove the animals which reacted in the healthy herd and transfer them to the infected one. It was this method I recommended in the beginning, and in this form the *Bang Method* is most

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known in the world. I have had many good results in this way; many herds, great and small, are freed from tuberculosis both in Denmark and in other countries (*e.g.*, in Sweden and in Hungary and Austria).

But after some years I saw that it was *not always* the best way to do, especially when I had to work with a herd in which tuberculosis had existed for many years—as was the case in most big milking herds on large estates. If the owner had two farms so that complete isolation was easy, it was, as a rule, an easy task to get rid of the disease, but if it was necessary to keep both herds at the same farm, it was often rather difficult. Not infrequently, too, many isolated animals reacted at the retest, as a rule only a few per cent., it is true, but when, in a single year, the number was rather large, the owner was inclined to lose courage and would give up half way. Those who persevered finally had good results, but it took often a rather long time. Reactions on retests, no doubt, most frequently were caused by transportation of bacilli from the diseased animals to the healthy ones and, therefore, occurred especially often when the isolation was maintained less carefully than it ought to be, or when there remained in the infected herd animals with open tuberculosis (dangerous spreaders). I thought more and more, however, that it not infrequently happened that between the adult animals, which in years past had been exposed to contagion, there would be not a few who were really infected. Although they did not react, such cows may not rarely be found to have in some lymphatic glands some small tubercles of long standing, encysted, it is true, and consequently harmless for the moment, but still sometimes liable to break out again.

Already, in 1899, at the International Veterinary Congress in *Baden-Baden*, I had mentioned this fact, and I said that in beginning the combat against tuberculosis in a large herd, that had long been affected, there would be very little gained by isolating the 10-20 per cent. of cows that might not react. I preferred to let the old herd remain untested and begin the formation of a new healthy herd simply by putting the new-born (and perhaps also some very young) calves in a separate clean building and feeding them on tubercle-free milk. On the basis of my long experience I still maintain that this is the *safest way* of rooting out tuberculosis in a herd that has long been infected. Besides the calves, we might probably, without greater risk separate heifers, if these hitherto had been stabled in other sheds than the cowshed and had not otherwise been exposed to contagion.

I think it natural to call this method the *Modified Bang Method* (a name sometimes used in U.S.A.). I admit that the rooting out of tuberculosis might in some cases be accomplished in a little shorter time by following my old method—and farmers often prefer this way—but in the long run there will not be a great difference in time, because reactions at the retests will, as a rule, retard the final result. Experience has taught me that as a rule it will be wiser to progress *slowly* and avoid the trouble which is so often, in the first years, connected with the keeping of two milking herds on the same farm. When you begin with establishing a small healthy herd of young animals, which have never been exposed to contagion, it costs very little, and usually there will be no reactions to the tuberculin tests. The owner will have the pleasure of seeing that in a few years he rears a yearly-progressing, healthy herd of young, promising cattle. It gives him confidence in the system, and no doubt every intelligent farmer will feel he ought to continue the work and spend the money that might now be claimed in order to reach the goal.

If we do not know the health-condition of a herd, it will, of course, be natural to begin with testing the whole herd with tuberculin. If only some few react, these must be removed, their place in the stable be cleaned and disinfected, and we may *hope* to get rid of the disease in this simple way, although it certainly rarely happens. When the herd contains many reacting animals, the owner must arrange as good a separation between reacting and non-reacting animals as possible. I must earnestly encourage you to take the strongest possible measures from the outset. Never take half measures! And if it is a large herd, in which the farmer himself cannot superintend the separation, he ought to encourage the chief manager, *e.g.*, by giving a premium for each animal that is kept free from infection.

At an International Congress for Cattle Breeding at *Scheveningen*, in 1923, I published an English paper on the repression and eradication of tuberculosis in cattle. A reprint of this paper was published in *The Journal of Comparative Pathology and Therapeutics*, Vol. XXXVI, and is probably known by many of my British colleagues. In order to show how easily and at how small a cost a common peasant can change his highly tuberculous herd to a healthy and much more productive one, I quoted some examples. A farmer, *A. L., in Smeerup* (Seeland) had, in 1895, 22 head of cattle. The herd was so tuberculous that in the previous few years he was obliged to sell 12 cows and heifers at an average price of 25 shillings. To the tuberculin test all reacted except an old cow and four calves. He isolated the calves in a small compartment in another house on the farm. In the following years he proceeded in the same way, and in 1898 he had 12 young animals (calves and heifers) that were kept isolated from the infected cows, of which he still had 16. The 12 isolated animals were now tested with tuberculin, with the result that one reacted and was removed. Afterwards the healthy herd was tested every year and *none reacted*. The new herd increased year by year to 19, 24, 28, 30, and the tuberculous herd decreased to 7 in 1900 and 3 in 1901, and in 1902 he had only healthy animals, all reared from his own cows, which at first were all infected with tuberculosis. The farmer tended his cattle himself. He began with the healthy animals and tended the tuberculous later; he used separate utensils for each herd. When the new herd contained more animals than the infected, it was transferred to the old cowshed, which was, of course, very carefully disinfected, and the few reacting animals were put in the new stable. In 1902 I asked him how much money he had spent on the work. He answered: " About 200 Danish crowns " (about 250 shillings) which he paid for the arrangement of two small new compartments—a small sum, indeed, for the excellent result. (Another farmer had to pay 50 Danish crowns for a corresponding result). Mr. A. L. was, of course, very pleased. He wrote to me " If I had not taken this step, I should probably have been ruined—*and the whole thing is not at all difficult*. Anybody can do it, if only he puts confidence in it." This

herd has been tested several times since and proved to be healthy.

Here is another example: A farmer, *P. H., in Ulslev*, on Falster, had a herd that for many years had suffered severely from tuberculosis. In 1904 it was tested with tuberculin and almost all reacted. Nothing was done. The disease increased; many young animals had to be sold at a very low price and two cows died. Many swine were found to be tuberculous at the slaughter-house, to the farmer's great disappointment. The veterinarian advised him to free his herd from tuberculosis, and eventually he began. In 1912 the herd was tested again. Sixteen animals reacted, *i.e.*, all the cows and some calves; only six small calves were healthy. A small compartment was constructed in the barn, and here were stabled the newborn calves, which the man wanted to rear, and two small calves which he bought. The next years there were in this shed ten calves. Two of them reacted at the retest; one had been bought, the other had been given raw sweet milk because it suffered from intestinal disease. Later on none of the separated young animals reacted. In 1914 the healthy herd comprised 13 animals, next year 22 and in 1916, 26. In the reacting herd there were in 1914, 13 animals, next year only 6, which were sold in February, 1916. After the test in 1915 the healthy animals were transferred to the carefully-disinfected cowshed, and the reacting animals were put in the barn. The farmer was, of course, very pleased with the result; to have, after four years, changed his highly-tuberculous herd to a healthy and much more productive one—and *what did it cost him?* He said that he had had no other expense than eight Danish crowns (about ten shillings) for some boards to make cribs of in the barn. In addition, he cemented the floor in the new compartment, but that should have been done in any event, on account of rats.

This excellent result has had a good influence on P. H.'s neighbours, so that 29 of the 33 members of the local *breeding-association* have now tubercle-free herds.

As in the above-quoted case the farmer tended the cattle himself, he had a clear understanding of the necessity of a complete separation between the two herds.

As may be seen from the table, this case has a special interest because of the great increase in yield after the herd became healthy. The increase in *percentage of fat* may be caused chiefly by the use of good bulls, but I believe I am right in supposing that the increase in milk is especially caused by the soundness of the cows. It is a well-known fact that cows suffering from advanced tuberculosis do not give so much milk as they would do, if healthy. *It does not pay to feed tubercle bacilli!* That is one of the principal reasons why farmers should try to get rid of tuberculosis in cattle. This farmer, P. H., on Falster, had already, after four years, on an average from every cow 35 kilo. more butter yearly than before, and 10 years later the butter production was 71 kilo. more per cow. I do not exactly know the fodder ration; it has probably also been somewhat enlarged. But the manager of a big farm in Northern Jutland once told me that in the period, when tuberculosis became eradicated from his herd, he observed that young healthy cows gave, *on the same fodder*, 2-2½ kilo. milk more daily than cows of the *same age* belonging to the reacting division, and the owner of an estate on Lolland, with about 140 milk-cows, found that his income was about 50 Danish crowns more per cow yearly after his herd was freed from tuberculosis.

Many farmers suffer a great loss by death or by premature slaughter of tuberculous animals, but even if such misfortune does not always occur, there is no doubt that a tuberculous herd gives a much poorer return for the fodder than a healthy one. Tuberculous cows on an average live much shorter lives than they would do if healthy. The farmer is often obliged to push them out at the age of five years, long before they reach their greatest productivity, and that is indeed a heavy loss. From an *economic* point of view, therefore, there is the greatest reason to combat tuberculosis in cattle. And when we consider that it is not at all an uncommon thing for tuberculosis to be transferred *from cattle to man* (especially to young children by means of the raw milk—as has been proved by so many British researchers) the necessity of combating cattle tuberculosis is still more evident.

In almost all civilised countries there is a considerable and a growing interest in combating this disease, but opinions differ a good deal about the measures to be taken. Radical measures are as yet only recommended in America. In most other countries the greatest stress is usually laid on eradication of as many animals with *open tuberculosis* as possible. In Germany, V. Ostertag has adopted my system of protecting the calves against infec-

| Year. | Reacting Cattle. | Healthy Cattle. | Of the Isolated Cattle reacted: | | Average Yield per Cow. | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Year. | Kilo. Milk. | Percentage of Fat. | Kilo. Butter. |
| 1912 | 16 | 6 Calves | — | The calves were placed in a compartment in the barn. | — | — | — | — |
| 1913 | — | 10 calves | 2 | One bought, one fed on raw milk. | 1912-13 | 3,342 | 3·48 | 129 |
| 1914 | 13 | 13 calves | 0 | — | 1913-14 | 3,686 | 3·53 | 145 |
| 1915 | 6 | 22 | 0 | The healthy animals now removed to the stable, the reacting to the barn. | 1914-15 | 3,844 | 3·51 | 150 |
| 1916 | 0 | 26 | 0 | The six reacting sold. | 1915-16 | 3,909 | 3·78 | 164 |
| 1920 | 0 | 26 | 0 | — | 1920-21 | 4,380 | 3·50 | 171 |
| 1924 | 0 | 28 | 0 | Epizootic abortion, 1922-24. | 1924-25 | 4,393 | 3·87 | 190 |
| 1927 | 0 | 36 | 0 | Foot-and-mouth disease, 1923 and 1925. | 1926-27 | 4,513 | 3·96 | 200 |
| 1928 | 0 | 30 | 0 | | | | | |

tion by separating them from infected stables and prohibiting their infection through the milk, but he thinks it unnecessary to keep the new young herd permanently separated from the old infected animals. He thinks it possible to get rid of almost all cases of open tuberculosis so that the young healthy animals might after some time without risk be stabled in the old big stable together with the adults. I admit that he has organised a control, clinical and bacteriological, over the health condition of the adult animals, which probably cannot be bettered, but I am convinced that it cannot be made possible even by the most careful control to find all cases of open tuberculosis and that, therefore, the placing of really tubercle-free animals in an infected stable will always be very dangerous. V. Ostertag can, no doubt, detect many cases of open tuberculosis, and in removing them make the health condition in the herd somewhat better, but reports from *Germany* show that after a few years the condition will be about the same, and he has never been able to root out tuberculosis from a herd in that way. That can only be done by mine, or by the American method.

In *Denmark* the fight against cattle tuberculosis is carried on in two ways, voluntary and obligatory. First (in 1893) I got the Government to grant a sum of 100,000 Danish crowns yearly in order to help farmers who wanted to root out the disease from their herds according to my method. The veterinarians had to test the herds with tuberculin and advise the best isolation, on the condition that the farmer promised to maintain the isolation at least one year. In 1898 the law was amended, and it was now ordered that all *skimmed milk* and *buttermilk* should be *heated* to 80 degrees centigrade at the diaries before these products were sent back as food for calves and swine. This regulation has played a very great part as a prophylactic measure against the spreading of the disease. At the same time it was ordered that cows suffering from *udder tuberculosis* should be slaughtered and a compensation paid to the owner. A new amendment in 1904 ordered that all *butter*, prepared for *export*, should be made of cream that, before the churning, was heated to 80 degrees centigrade. Finally, the new Tuberculosis Act of March 31st, 1928, orders that not only cows with udder tuberculosis but also *cows with uterine tuberculosis* shall be slaughtered and compensation paid by the State, and that also cattle with *advanced open lung tuberculosis* shall be treated in the same way. Besides these obligatory provisions, the law still contains a sufficient help to farmers who want to free their herds from tuberculosis by my separation method.

The eradication of tuberculosis from a herd can, in my opinion, only be accomplished by the breeder himself. The State may help him more or less, but even the formation of an *accredited* herd in U.S.A. demands very active co-operation from the farmer. That he can carry out the work with very little help (or without any help at all) was already proved more than 30 years ago, and it is a great pity that, as yet, comparatively few have taken up this noble task. The measure which I recommended had at first many enthusiatic followers in Denmark, but after a few years there came a sad falling off. The work, however, has never been given up in Denmark. Whereas in the period May, 1896, to June, 1897, about 3,700 herds with about 85,000 head of cattle were tested, the number in 1899 had diminished to 1,293 herds with 33,568 animals, and in 1901 to 695 herds with 18,818 animals. In the following 13 years the number of tested herds varied between 543 and 895 yearly (of which 200 to 300 yearly were new herds, tested for the first time) and the number of tested animals varied from 19,000 to 27,000 yearly. In the war-time the process diminished, it is true, but in the last few years it has increased in a very pronounced degree. In 1922 there were tested 1,676 herds with 47,627 animals, and of these 892 herds with 11,045 animals were tested for the first time. The reaction-percentage was 11·9 on the average, but in the herds which had been tested before (where separation had been made) it was not more than 5·4, whereas it was 26·1 in the previously untested herds. In the two following years the number of tests was about the same, but then it diminished on account of a very severe outbreak of foot-and-mouth disease. After this had ceased, the number of tests again increased, and in 1928 there were tested 3,044 herds with 70,495 animals (914 herds for the first time).

The joyous fact that the interest in the fight against tuberculosis has awakened after long years of sleep no doubt signifies that farmers begin to understand that it is worth while to make some sacrifices in order to have healthy herds and to see that these sacrifices are often rather small. In the course of years many pamphlets have been written and many lectures given on this subject, and many veterinarians no doubt have worked as good teachers while practising.

In a country such as Denmark, where *co-operation* plays a great part in the farmer's life, it has been a good idea to make use of this excellent system also in the fight against tuberculosis. The veterinarian, N. O. Nielsen, in *Remkolde* (Seeland) already, in 1905, had persuaded a great number of farmers in his district to join a "*Tuberculin Association*" with the object of promoting the breeding and maintenance of non-tuberculous herds of cattle and pigs. Such farmers only were allowed to join as had their stock subjected to the tuberculin test and, in case of the herd proving only partially healthy, had suitably isolated the healthy animals from the diseased ones. No increase of the herds by animals of another stock, except calves under one month, was allowed unless they came from a healthy herd or at least had been found healthy at a tuberculin test. The object of the association was, besides setting a good example, to facilitate the *purchase of healthy animals*, so that members, who want to buy or sell, may apply for advice to one of their number, who keeps a list of the farms where healthy animals are for sale. To some of the members was also delegated the task of superintending the heating of milk at the diaries.

The association has gained many adherents and has worked with very good results. At the start it had 40 members; 26 herds were healthy, 14 were partly infected but were on the way to be cleaned according to my method. At present 274 members have tubercle-free herds, with 5,323 animals (adults and young). Of these, 34 were herds on "peasant farms" and 65 on "small-holders'" farms originally tubercle-free, and 130 farms were cleaned in the course of years. Many of these had at first only few reacting animals; in all, 1,978 reacting animals were removed from these herds. At present separation-accommodation exists on four great farms (including 16, 45, 140

and 216 animals) and in two small herds with nine animals. Very few of Mr. N. O. Nielsen's clients have as yet not taken part in the work. At the annual meetings of the association may members have reported with pleasure how the work has been carried out in their herds and recommended it to their colleagues. All farmers have found the expenses small (the tests are paid by the State) and have commonly declared that the labour was not so great as they first expected. Regarding the *time* required for the cleaning of a herd, Mr. Nielsen writes, in his last report, that herds with 20-50 cows as a rule have been cleaned in 4-6 years; smaller herds in shorter time. Herds with some 100 cows can, in his opinion, seldom be cleaned in less than 8-10 years, if the expenses should be moderate. On his biggest estate (Rosenfeldt and three other farms) it took a longer time, but when the work was finished, the owner (Chambellan Oxholm and his widow) had 1,100 healthy and excellent cows. The milk from this estate is partly sold as " infant's milk " in Copenhagen. The manager, Mr. Spang, declares that, as the tests are *gratis* and the expenses, caused by isolation measures, as a rule were small (four farms and on the chief farm separate stables), he thinks that Danish landlords have made a great mistake in not more willingly accepting the help offered them from the State.

The Association's *sales-bureau* has given much help towards replacing reacting animals by absolutely healthy ones, because it is of great value to know with certainty that the bought animal comes from a tubercle-free herd and never has been exposed to infection. But also, outside the Association, such a bureau can be very useful and through it there are sold many healthy animals to other parts of the country. In 1927 there were sold more than 30,000 crowns' worth of such animals. Also, in case of sale to *other countries*, such bureaux might be very useful. The control *of the heating of the milk* at the diaries through some of the members has had a very good effect; so good, that this control at present is found superfluous. No trespassers against the law have been found for a couple of years.

Another form of *co-operation* is *between the suppliers of the diaries*. In 1920 the veterinarian L. Rasmussen, in *Ringe* (Funen), persuaded the majority of the members of the local diary to agree to let their herds be tested with tuberculin, to try to get rid of tuberculosis in the herds where it existed. The local dairy received the milk from 224 herds with 2,400 animals. According to a report from the year 1923, 210 herds with about 2,300 animals were tested, of which 100 (with 1,150 animals) were at first free from the disease. Seventy herds (with 700 animals) were subjected to cleaning experiments and 35 of these were at that time cleaned. The same idea was, in the following years, taken up in not a few other creameries. The great outbreak of foot-and-mouth disease stopped this movement for some years, but now it has begun again.

It is of some interest that the dairy in Ringe sold the milk from tubercle-free herds to consumers in the villages who were willing to pay a little higher price for it, and, so far as I know, this measure is adopted in other places.

The increasing interest in the fight against tuberculosis in the most recent years has caused a peculiar alteration in our measures. Many Danish farmers want to know the real health-condition in their herds, and as they do not know in advance if they are able to accomplish the separation between healthy and reacting animals which the Government demands for granting the complete free test (including pay to the veterinarian), they have asked the State to deliver free tuberculin to the dairies, when the majority of the milk providers want to have their herds tested without giving any promise of separation in advance. The Government has accommodated this desire, on the condition that the dairies send a yearly report of the result of the test. The dairies agree with the veterinarians on the remuneration for the tests. This arrangement has found many adherents, so that in the last few years free tuberculin was delivered for about 200,000 animals. I think that this arrangement is rather beneficial. The reports show that over the whole country there is a great number of herds that are completely free from tuberculosis. A year ago there were tested 13,962 herds belonging to the suppliers of 140 dairies. Of these herds, 5,499 were completely tubercle-free. In the less infected regions more than half of the herds were free, and in such regions about 80 per cent. of the tested animals were healthy.

It is to be hoped that most of the farmers, who have the satisfaction of knowing that their herds are really healthy, will take care to maintain this happy condition, and it also seems probable that farmers with few infected animals will try to get rid of the disease as soon as possible. Many farmers with more infected herds will probably not do much in the first years, but there is reason to believe that it will come.

A very happy thing, in my opinion, is that the biggest dairy association on the Danish islands, *Trifolium*, has become interested in rooting out tuberculosis. It is an association of about 100 owners and tenants on great farms with more than 11,000 milk-cows (and about 30 smallholders and peasant-farmers with about 500 milk-cows) who send the milk to four big dairies and, besides, sell a rather large quantity of milk to consumers in Copenhagen. The dairies are almost entirely occupied with making different sorts of *fine cheese*, mostly for exportation.

The milk suppliers are not obliged to root out the disease and some of them have as yet not begun, but the leading men are anxious to have as much as possible done in a rational manner. Most of these suppliers work really with great interest, and many have made good progress, and 23 herds (mostly large herds) are already tubercle-free. It will be a very good example for other big farms when *Trifolium* one day can report that almost all its members have succeeded in getting rid of the disease.

Many big herds, which do not belong to this association, are also in this happy condition.

As an example of what can be done by means of co-operation, I have the pleasure to quote the result of the fight against cattle-tuberculosis in the island *Bornholm* in the Baltic. Here the disease has not been very widespread, although there has been not a little of it. But the interest for combating it has long been great, both among prominent veterinarians and among some leading farmers. All the 20 dairies have taken up the work, and the progress has been so great that out of the 3,797 herds, whose milk was sent to the dairies in 1928, 3,171 (85·5 per cent.) were free from the disease. At eight dairies the percentage of healthy herds was between 90 and 97·4, at one little dairy even 100. The majority of the farmers are inclined to make the eradication compulsory, so that there is good reason to expect that after a few years the whole island will

get rid of the disease. At present the quantity of milk sent to Copenhagen from Bornholm is very great.

A good help in the fight against the disease is the growing interest in some *cities* for absolutely tubercle-free milk. The largest city in Lolland, *Nakskov,* has claimed, in some years, that all milk sold in the town comes from tubercle-free herds, and some other small towns in Seeland are on the way to follow this good example. In Copenhagen and some other cities a rather large quantity of such milk has for many years been sold as *milk for infants.* For this milk the health-commission does not only claim freedom from tuberculosis, but also a fodder that makes the milk especially good for infants. The price is consequently rather high, namely, 46 "ore" for a litre (common sweet milk, 37 ore). Now, milk is sold in Copenhagen from *tubercle-free* herds (without special claims to the composition of the fodder) for a price of 40 ore for a litre. There is no doubt that the best incentive to give the farmers interest in rooting out tuberculosis will be, that the consumers demand tubercle-free milk and are willing to pay a little higher price for it.

It is evident that my method is fit only for *breeders.* If you want to try to root out tuberculosis from a herd which is maintained by *purchase,* you must begin with slaughtering all the animals with open tuberculosis which you are able to detect. The other animals must be tested with tuberculin and the non-reacting must be separated as carefully as possible from the reacting ones. The purchased animals must be carefully tested with tuberculin and ought not to be admitted to the non-reacting animals before they have passed a new test after two months. But even this method will not always give a good result. The building of a new healthy herd by isolating the new-born calves and by protecting them against infection is a much surer method.

Finally, I shall mention an idea, which is set forth in Finland, in Germany, and partly in Denmark; namely, to facilitate the isolation of calves by means of co-operation, in that some farmers unite in keeping all the calves, which they want to rear, on a special farm. There is no doubt that this would be a practical system, but I fear that it will not be easy to persuade farmers to adopt it.

### Zoology in Postage Stamps.

A display of postage stamps bearing pictures of beasts and birds has been arranged in the British Museum (Natural History), South Kensington, at the entrance to the lower Mammal Gallery. Fifty-six types of stamps have been chosen for the first frame, and since these do not by any means exhaust the number of creatures portrayed by philatelic designers, further series are to be added, if the exhibition appears to attract public interest.

Below each stamp is a label bearing both the popular and the scientific name of the specimen shown, with directions for finding in the general galleries of the Museum an example of the animal stuffed and mounted. Many of these are familiar to the juvenile students, whom the stamp exhibition is chiefly intended to attract; the Malay tiger, for instance, and the orang-utan, the dromedary, and the seal. Less familiar zoological names are the bongo (*boocercus eurycerus*) and the kob (*adenota kob*), both depicted on the stamps of Liberia, and the gaur (*bibos Gaurus*), the sambar (*rusa unicolor*), and that curious tusked bird the rhinoceros hornbill (*dichocerus bicornis*), which are all to be found on the stamps of North Borneo. These two countries and Abyssinia are the countries most frequently drawn upon here, though nearly 30 countries in all are represented. On one of the North Borneo stamps is to be seen a picture of the cassowary, a bird which is not in fact found there.

## Royal College of Veterinary Surgeons.

### Annual General Meeting.

The eighty-seventh Annual General Meeting of the Royal College of Veterinary Surgeons was held at the Royal College of Surgeons, St. Stephen's Green, Dublin, on Thursday, June 5th, 1930, when the following members were present:—Professor Craig, M.A. (President), in the Chair, Colonel J. W. Brittlebank, Professor T. G. Browne, Messrs. J. H. Carr, J. Carroll, J. C. Coleman, S. Conway, J. Cosgrove, J. Dodd, P. F. Dolan, J. Doyle, S. A. Evans, R. B. Freeman, J. F. Healy, F. A. Heney, V. G. Hinds, G. Hobson, P. J. Howard, R. Hughes, W. Ingram, W. Kearney, J. E. Kenny, H. R. Langley, E. W. Little, J. J. Lyons, J. A. McMenamin, T. A. Mernagh, T. R. Mulcahy, J. H. Norris, Professor J. J. O'Connor, Messrs. H. O'Leary, W. Cargill Patrick, C. Roberts, M. Ryan and Lieut.-Colonel P. J. Simpson.

The Secretary read the notice convening the meeting, as it appeared in the *London Gazette* for Friday, May 9th, 1930.

Apologies for absence were received from the following members of Council and others:—Major J. Abson, Dr. O. Charnock Bradley, Professor J. B. Buxton, Major G. W. Dunkin, Professor S. H. Gaiger, Professor F. T. G. Hobday, Messrs. J. H. Holroyd, G. H. Livesey, G. H. Locke, J. W. McIntosh, Sir J. Moore, Dr. A. L. Sheather, Colonel G. K. Walker, Mr. J. Willett, Messrs. S. R. Cussen, H. Gray, J. Lowndes, P. A. McCorry, J. R. Rider, J. Small and S. Villar.

The minutes of the previous Annual General Meeting held in London on Thursday, June 6th, 1929, were read and signed as correct.

Election of Council.

The Secretary read the following report of the Auditors:—

28 Queen Street, E.C.4.
*May 30th,* 1930.

*Annual Election of Council.*

"We certify that we have checked the Voting Papers sent in for the Annual Election of 11 Members of the Council of the Royal College of Veterinary Surgeons, and the number of votes obtained by the fifteen members nominated for the vacancies are set out below against their respective names. Fifteen voting papers were spoilt, and were accordingly cancelled.

| Name. | Votes. |
|---|---|
| Brittlebank, J. W. ... ... ... | 944 |
| Abson, J. ... ... ... ... ... | 895 |
| Livesey, G. H. ... ... ... ... | 817 |
| Coleman, J. C. ... ... ... ... | 788 |
| Hughes, R. ... ... ... ... | 770 |
| Walker, G. K. ... ... ... ... | 738 |
| Spreull, A. (Senr.) ... ... ... | 679 |
| Wragg, W. G. ... ... ... ... | 659 |
| Simpson, R. ... ... ... ... | 655 |
| Rabagliati, D. S. ... ... ... | 623 |
| Nairn, W. ... ... ... ... ... | 603 |
| Cormack, J. L. ... ... ... ... | 596 |
| Rees, W. D. ... ... ... ... | 588 |
| Burndred, W. G. ... ... ... ... | 538 |
| Kirk, W. H. ... ... ... ... | 465 |

(*Signed.*) Woodhouse and Wilkinson."

The President thereupon declared the following 11 gentlemen duly elected Members of Council, namely:—Brittlebank, J. W., Abson, J., Livesey, G. H., Coleman, J. C., Hughes, R., Walker, G. K., Spreull, A. (Senr.), Wragg, W. G., Simpson, R., Rabagliati, D. S. and Nairn, W., the three last-named to take the places respectively of Mr. J. McKinna, deceased, Mr. W. S. King, resigned, and Mr. J. H. Carter, deceased, whose term of office expires in 1933.

Annual Report.—The Annual Report and Statement of Accounts, which had been circulated, was submitted, and the President moved its acceptance and adoption. In doing so, Principal Craig said that the decline of students from post-war years to 1927 was very marked, but since 1927 the number had gradually increased, and in 1929 it was very much improved with regard to first year students.

Referring to the recommendations made by the Lovat Committee, the President said one of these dealt with the necessity for improved Colonial Service, and he was glad to be able to announce that the Colonial Office had instited a series of ten scholarships, value £250, to be awarded to the members of the College for the next nine years. These scholarships were open, not only to the students of Great Britain and Scotland, but also to those in the Free State. With regard to finances, notwithstanding that every economy had been practised, the excess of expenditure over income was £39 19s., the debt to the bank at the end of the year being £1,152 1s. 9d.

Mr. J. Coleman seconded, and the Annual Report and Statement of Accounts, as submitted, was adopted.

Vote of Thanks.—On the motion of Colonel Brittlebank, seconded by Colonel Simpson, a hearty vote of thanks was accorded to Professor Craig, and the meeting terminated.

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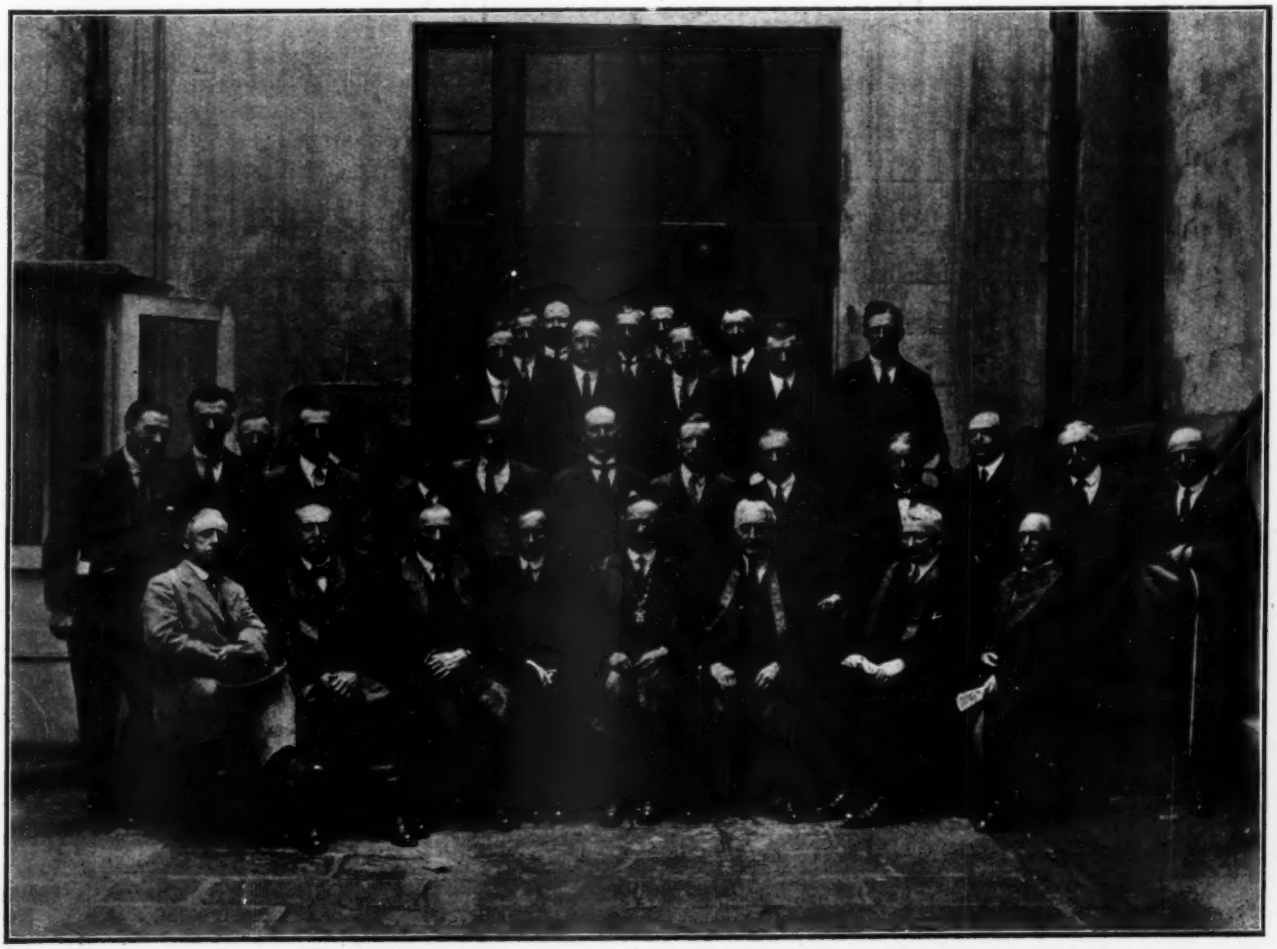
## The Annual Dinner.

### Governor-General's Tribute to the Veterinary Profession.

The annual dinner of the Fellows and Members of the Royal College of Veterinary Surgeons and their guests was held in the Royal College of Surgeons, Dublin, on the evening of June 5th, the President, Professor J. F. Craig, presiding.

The President, proposing the toast of "The Governor-General and the Prosperity of Ireland," said:—

In submitting this toast for your approval, I wish to offer a hearty welcome to his Excellency. We regard him as the guest of honour at our gathering and I wish to express to him, on behalf of the veterinary profession, our deep sense of appreciation of his presence here to-night. We know that in the fulfilment of his high office, he has taken



**Royal College of Veterinary Surgeons' Annual Meeting, Dublin, 1930.**
**Some Members of Council and Other Representatives.**

the deepest interest in the various movements which affect the health, well-being and happiness of the people. These aspects of national life are linked up with the prosperity of the country. As for the prosperity of Ireland, all of us wish it well. (Cheers.) Its prosperity is bound up with our happiness and even with our individual progress. Those of us who live in this country have come to love it. Its fascination increases with time, even in spite of the shadows which have crossed it. It has been a source of thankfulness to us all to see this young State emerging from chaos and shaping its course towards peace and prosperity.

The Royal College of Veterinary Surgeons has looked with sympathy and hopefulness at its gradual development. It has its own special interests in this country. Its interests are bound up with its graduates. All veterinary surgeons in Ireland are members of this College and naturally their welfare is the concern of the R.C.V.S. It is fervently to be hoped that the cordial intimate relations which have existed in the past between the profession here and the Royal College will continue in the future. (Cheers.)

On these grounds, it is apparent that the task is particularly appropriate to the occasion and I therefore ask you to accept with enthusiasm the toast I am submitting. (Cheers.)

The Governor-General, responding, said :—I thank you for the kindness of your welcome to this Annual Dinner of the Royal College of Veterinary Surgeons. I realise the importance to Saorstat Eireann of the duties which members of your profession discharge. The need for maintaining a high standard of veterinary knowledge and veterinary practice is publicly recognised by the State endowment of a laboratory of veterinary research, and by the employment both by the State and by local bodies of veterinary surgeons to ward off or stamp out animal diseases. If intelligent precautions are adopted, our island position is a substantial advantage, but it can never relieve us from the duty of providing the veterinary organisation and equipment needful to enable us to deal effectively with animal diseases.

Apart from the growing national asset of upwards of twenty millions of poultry, we have a total of about nine millions of animals. The annual value of our exports—only exports—of live stock and live stock products is estimated to be about 34 millions sterling. The health of our stocks for internal purposes, and the maintenance of our overseas market depend largely on the knowledge, the alertness, and the probity of your profession. We have, in recent times of stress, found you trustworthy, and I am sure that you will hand on your traditions of faithful zeal to your successors. If it is troublesome to shippers to have inspections before shipping, the precaution not only protects our export trade and our reputation, but is a further security both to your profession and to farmers' organisations that contagious diseases must be speedily detected. Your skill finds its necessary support in the intelligent and active co-operation of the agricultural classes. Without that fulcrum your scientific lever would be powerless.

I can remember the days when the local horse doctor or cow doctor was called in when the owners of stock found a few alleged remedies ineffective. It is possible that in many places the help of such people is still valued, but if that is so, its present value is based on knowledge which Colleges such as yours acquire and disseminate. Like Virgil's bees, your members do a great deal of work of which others enjoy the profits. Your ultimate satisfaction must be that your service is of national advantage and that your usefulness at first-hand is being daily more and more appreciated.

If I may be allowed to refer to personal experience, I should like to tell you regretfully that it is many years since I thought professional advice a necessary preliminary to buying a horse, but also to add joyfully that I have on two occasions within the last few months had reason to be grateful for that advice given to me as the owner of milch cows.

I have laid stress mainly on the help given by your members in preventing and curing animal diseases, but I do not, therefore, ignore the value of your knowledge as regards animal breeding. That is an old story and we are all looking ahead. Please believe, gentlemen, that I am not in any way underrating the present value of all your services if I go on to state that each year adds to the sum of your useful knowledge, to your practical helpfulness, and to the more extended recognition of the need for competent veterinary advice and instruction. There is an old saying that knowledge comes but wisdom lingers. I should like to think that the wisdom of our stock-owners progressed as quickly as your knowledge. I am afraid I must, in my time, be content with an increase in the number of practising veterinary surgeons. Whatever happens in the remote future, for the present it is clear that a group of great national industries needs all the help that the skill and character of your profession can supply. I hope your College will always, as now, be found waiting in front of popular knowledge, because we shall go back and not forward when systematised study cannot direct practical effort. (Cheers.)

### Medicine.

Mr. J. H. Norris, in proposing the toast of Medicine, said :—I have the honour to give you the toast of Medicine, and I esteem it a very great honour. At every annual dinner of this College this toast is never omitted and, no matter how badly it is hashed by the proposer, it is always enthusiatically received. I am sending this out as an insurance premium against impending disaster. I understand that yesterday evening an American lady asked an English friend " Who is the Aga Khan who has won this famous victory in the Derby? " The reply was that " To millions of the Indian race he is considered as the representative of God on earth and he takes precedence next after an English Duke ! " You will see that gentleman's Eastern and Western position is properly described ! Medicine is practised with hope of fee or reward and as to science it takes precedence second to none. It is a very comprehensive subject, embracing very many minor sciences and it is most interesting to glance back at its history. In its early days it was wrapped more or less in superstition, and as the progress depended absolutely upon observation, progress was naturally slow. It had no laboratories to provide a guide. Later on, Anatomy and Physiology and experiments on animals came to its aid and in the field of animal experiments it made its more brilliant discoveries. Harvey used the method in his great work on the circulation. John Hunter probably learned more from the study of animals than he did from human beings. In the last century it has made very wonderful progress ; Jenner's work

on vaccination, Simpson's work on anæsthetics, Pasteur's work on the germ theory of disease, folowed by Lister's antiseptic surgery. That is a record quite sufficient for the human race to be extremely thankful. We have seen recently great developments in the application of sera, antigens, vaccines in the treatment of disease, the advance in the knowledge and importance of the ductless gland and, in another field, quite recently, the knowledge of deficiency diseases depending on vitamins. There is no limit to the march of medical science, and in the next 100 years there will be doubtless more brilliant progress than in the past. The two professions of medicine and veterinary medicine are branches of one great science, confronted with many common problems. In our early days the profession was helped by the leaders of medicine—but now there is a spirit of co-operation between the two professions. The medical man has an advantage over the veterinary surgeon—the advantage of numbers, tradition, and such endowments. Other advantages are that the medical man can ask the patient what is the matter with him, whereas the veterinary surgeon has to ask himself. The medical man may get his patient to kick against what he prescribes, but he does not bite. We can make more *post-mortem* examinations than the medical man, and we have much wider scope in preventive medicine.

Surgeon R. A. Stoney said, in reply:—My task to-night is a double one and none the less pleasant for that.

First, as President of the Royal College of Surgeons in Ireland, it is my pleasing duty to offer a sincere and hearty welcome to the Royal College of Veterinary Surgeons and to say how pleased we are to lend our hall for the entertainment of a sister College. My second duty is to respond to this toast of Medicine. Unlike this College, the Royal College of Veterinary Surgeons is not a teaching, but a licensing and examining body for students who are taught by various veterinary colleges and schools. Here in Dublin we are proud of the Veterinary College of Ireland, which was opened in 1900 and, after being for some time controlled by a Board of Governors, has now been taken over by the State and placed under the Department of Agriculture. Since its foundation 30 years ago, it has trained the great proportion of veterinary surgeons practising in this country and, in addition, has sent many of its graduates to hold responsible positions throughout the Empire.

The relations between veterinary surgery and medicine are close and important. This is specially true in the realms of research into the problems of disease, and research workers on both sides have found advantage in close association, as in the recent work at Mill Hill in connection with the ætiology of canine distemper and its successful vaccination. The facts ascertained and the observations made in this investigation may have a far-reaching effect in relation to the various diseases due to filterable viruses that attack both men and animals.

The Medical Research Council, in a recent report, stated "Medicine has always gained by the study of animal diseases, and yet it should not fall unduly to medical interests to study animal diseases for the benefit of the animals themselves. The medical and veterinary interests should be developed side by side, together in active partnership, each giving and receiving benefits springing from cordial co-operation." Both human and veterinary medicine have much in common—the fundamental principles of physiology and histology are the same; the problems of disease have much in common also, yet it is not reasonable to expect that the experts in one should have a similar standard of knowledge in the other.

It is, therefore, by the close co-operation between medicine, using this term in its widest sense, to embrace all its branches, and veterinary surgery that we may hope for great advances to be made in the future, both in discovering the causes of diseases, which are yet obscure, and then passing to the further and more practically important stage of curing them.

I beg to thank you, Mr. President, for doing me the honour of coupling my name with this toast, and you gentlemen for the kind way in which you have received it. (Cheers.)

### Agriculture.

Mr. P. J. Howard, who proposed this toast, said:—I have been wondering why the most important toast has been entrusted to me. Because, if it were not for Agriculture, no other toasts would be needed. Agriculture seems just now all over the world to be sailing in troubled waters. I suppose that is why an innocent west countryman was chosen to speak up for it. Still, I am an optimist and though there may be for the moment clouds overhanging the agricultural picture, those clouds will pass away and there is always a silver lining to the clouds. I suppose we may take it that Adam was the first agriculturist and it was owing to the experience and discoveries of Adam in the pursuit of his argicultural work that all the other sciences sprang up, and all the other industries. We, as veterinary surgeons, are particularly concerned with the animal live stock of the agricultural industry. I would like to supplement the figures given by His Excellency in reference to live-stock interests in Ireland at the present time. The actual value in or about live-stock in Ireland to-day is some £70,000,000, and the value of the live-stock and products exported from the Free State amounts to over fifty millions. The value of the poultry industry at present is over nine millions. We have a very particular interest in the welfare of the live-stock industry in this country, and it certainly is to the credit of the veterinary profession that the live-stock of Ireland to-day enjoys the cleanest bill of health of any live-stock in the world.

The efforts of the veterinary profession in the past have eradicated several diseases that were the terror in years gone by of agriculturists. Pleuro-pneumonia and rinderpest are no longer the bogey of the farmer. In later years milk fever in cattle, that was always the terror of the dairy man, is no longer any trouble if the veterinary surgeon is called in in time. Recently, veterinary science has discovered an absolute cure and preventive for fluke in sheep, and in cattle, which in years gone by caused very severe losses to the agricultural community in this country. We have still with us some other affections, but with the help of veterinary science they also will be brought under control, and instead of veterinary science having to try to cure them, our aim will be to prevent them and thus save loss that would otherwise fall on the agricultural community. His Excellency referred to research, and I would like to stress the point that there are many troubles among the live-stock of Ireland needing investigation, and though we have an animal research station in Ireland it has not

yet had devoted to it the money that is necessary for the development. It will probably be the very best investment that can be made and will ultimately save millions. The poultry industry in this country is very important. Nine millions is no small thing to be gained by the farmers of this country for an industry that really does not cost them anything in the way of expenditure, because it runs concurrently with the other business of the farm.

I hope that the silver lining will soon show itself and that, with the help of veterinary science, there will be a greater improvement in the live-stock of this country. Agriculture can only pay through live-stock. Our minister, Mr. Hogan, is doing his best to grade up the live-stock of Ireland. Our horses cannot be touched or equalled in many parts of the world. Even the Aga Khan had to come for the help of Blandford to enrich himself with the Derby. I therefore give you, with much confidence, the toast of Agriculture—may it prosper! (Cheers.)

Professor J. P. Drew, responding, said, in the course of his remarks:—The present agricultural depression is not confined to this country, but is more or less world-wide. The main cause of the depression is high production costs without an adequate return. The position appears to be more grievous to the farmer on account of his demanding, like other members of society, a higher standard of living. If we take a sufficiently long view there are good reasons for believing that agricultural conditions will improve.

The whole rural population of this country is anxiously watching the results of what almost would appear to be a bold experiment started last year in the combined marketing of our butter. The collective marketing of dairy produce has been a wonderful success in competing countries, and its failure here would very seriously affect the future of agricultural developments in this country.

"The Royal College of Veterinary Surgeons."

Surgeon Haydon proposed the toast at the R.C.V.S. in the following terms:—I have much pleasure in proposing the toast of the Royal College. I understand that incorporated with the R.C.V.S. there are five teaching institutions, not the least important of which is the one we have at Ballsbridge. The course, too, has been greatly lengthened and broadened in recent years, so that now the minimum length of time is four years, and, I understand will soon be five. Surely, with the excellent teaching that the boys get from the distinguished professors, an immense amount of knowledge must be gathered in four years. I am also told that arrangements have been made for post graduate courses, which I look upon as most vitally important. And also there are at least two universities where degrees can be got. I wonder why it is that there are no university degrees for veterinary science in this country? I hope that want will be speedily remedied.

Veterinary education has been so greatly improved and extended that there is a marked change in the character and characteristics of the veterinary surgeon as we know him. The old idea of a veterinary surgeon was (1) that he was a fine, gay fellow; (2) that he was addicted to the wearing of picturesque clothes, and sometimes his language was still more picturesque. It was a *sine qua non* that he should be a first-class horseman. The modern veterinarian, I find when I meet him, to be modest, quiet in demeanour, conventional in attire—I cannot get them even to "talk horse!"

We are more particularly interested, of course, in our own college. It has done great work and it fills us with hope for the years to come. The amount of good work done to the general public by the veterinary profession is not anything like sufficiently appreciated by that public. Our college has turned out many men who are a credit to the profession, who can be relied upon to advance the knowledge and work of veterinary medicine in this country. Ballsbridge is the greatest horse show on earth. Who amongst us does not recall with pleasure and pride the beautiful specimens of horses we have seen there, and the first-class horsemen? One of the great secrets of the fame of Irish horses is the fire and stamina with which they are endowed. The great responsibility of keeping these magnificent animals in the pink of condition rests upon the veterinary surgeon, and there is no man here who has the smallest hesitation in saying that they will rise to the occasion as they have done in the past. The Irishman is fond of the blood horse, and there are many stories in Irish legend about the fire of Irish horses. Speaking as a medical man, we sincerely hope for more co-operation between the two professions. It is in the line of research that that co-operation can best be brought about.

The President, Principal J. F. Craig, responding to the fervently-honoured toast, said:—I thank you all for the enthusiastic way in which you have received this Toast. I am for the moment the nominal head of the profession in this country, and I would like to say, in regard to that, that it has only been a matter of chance (cries of "No, No,"). The Council of the College, who selected me to act as President for the current year, made the selection not so much because of the value of my services but rather on account of the view that it would be regarded as a compliment in this country. I know too well my own many weaknesses, but of these weaknesses I am sure that none of them includes a very high opinion of myself. At an earlier meeting the profession selected part of the Council to carry on the work under the Acts and Charters. The Council has prepared and presented an account of its stewardship to the members of the profession at the Annual Meeting. That account was received in a most cordial fashion and without evidence that the policy of the Council was not in accord with the wishes of the profession. That is a most satisfactory state of affairs. (Hear, hear.) If the members do not agree with the policy of the Council they can change it very readily. On this occasion they have been in entire agreement with the Council. The policy has always been to maintain the education of the veterinary student and of the veterinary graduate, so that he will be of the greatest possible service to agriculture and the stock-raising industry in this and other countries. The members of the R.C.V.S. are far flung throughout this great Empire. All the veterinary surgeons in this country are members of the R.C.V.S., as they are in Great Britain, and throughout the Colonies and Dominions. The interests of the Council are extremely wide, as are also the interests of the profession.

The horse is no longer, as it was formerly thought to be, our only patient. But the horse is still with us, as the references made here to-night prove, and the horse-breeding

## Victoria Veterinary Benevolent Fund.

**Annual General Meeting.**

The twelfth Annual General Meeting of the Incorporated Society was held at the Royal College of Surgeons, St. Stephen's Green, Dublin, on Thursday, June 5th, 1930, immediately after the Annual Meeting of the Royal College of Veterinary Surgeons. Colonel Brittlebank (President) occupied the Chair, and the following members were present:—Professor T. G. Browne, Messrs. J. H. Carr, J. C. Coleman, Professor J. F. Craig, Messrs. J. Dodd, S. A. Evans, F. A. Heney, G. Hobson, P. J. Howard, R. Hughes, W. Ingram, W. Kearney, E. W. Little, J. A. McMenamin, J. H. Norris, Professor J. J. O'Connor, Mr. W. Cargill Patrick and Lieut.-Colonel P. J. Simpson.

The Secretary read the notice convening the meeting.

The minutes of the previous meeting, which had been published in the *Veterinary Record*, were taken as read and confirmed.

Apologies for absence were received from the following:—Major J. Abson, Dr. O. Charnock Bradley, Professor J. B. Buxton, Professor S. H. Gaiger, Messrs. J. Holroyd, G. H. Locke, J. W. McIntosh, Sir J. Moore, Dr. A. Leslie Sheather, Mr. J. Willett, Messrs. P. A. McCorry, J. R. Rider, J. Small and S. Villar.

Election of Officers.

*President.*—On the motion of Colonel Simpson, seconded by Mr. Coleman, it was unanimously resolved "That Colonel Brittlebank be re-elected for the ensuing year."

*Vice-Presidents.*—The President reported that Mr. West desired to resign his office as Honorary Treasurer, but that Mr. Arnold Spicer, a Vice-President, would be willing to undertake the duties. It was thereupon resolved "That Dr. O. Charnock Bradley, Mr. S. H. Slocock, Mr. S. Villar and Mr. E. Alfred West be elected Vice-Presidents for the ensuing year, and that Mr. Arnold Spicer be elected as Honorary Treasurer."

*Honorary Secretary.*—It was resolved "That Colonel Simpson be re-elected Honorary Secretary for the ensuing year."

*Auditors.*—Messrs. Woodhouse and Wilkinson were elected Auditors for the ensuing year.

Annual Report and Statement of Accounts.—The Annual Report for 1929 was submitted, and on the motion of the President, seconded by Mr. Hughes, it was resolved "That the Annual Report and Statement of Accounts be adopted."

Election of Council.—It was resolved "That the following members of the Association be elected members of Council as representing members of the Fund:—F. L. Gooch, P. J. L. Kelland, G. H. Locke, Sir J. Moore, Mr. H. Sumner, Mr. J. Willett, Mr. W. Woods, Professor G. H. Wooldridge, Lieut.-Colonel T. Dunlop Young, and Mr. W. Jackson Young.

industry in Ireland shows no signs of decadence. But there is no doubt that in the future, and over the Empire as a whole, our greatest services will be in the direction of preventive medicine.

Professor J. J. O'Connor proposed the toast of the guests, and this was responded to by Commissioner-General E. O'Duffy and Mr. Cussen, Senior District Justice.

Mr. Clarke-Barry's instrumental trio performed a very enjoyable programme of music during the evening.

The Veterinary Record.
June 28th, 1930.

## A Diploma in Tropical Veterinary Medicine.

One by one effect has been given to the various suggestions put forward by the Lovat Committee appointed by the Colonial Office in 1928. We recently announced the first of these in the provision of Colonial Office Scholarships to enable science graduates to become veterinary surgeons and veterinary surgeons to take a degree in science. These scholarships come into operation at once and are intended to provide a trained *cadre* from which the Colonial Veterinary Service may be recruited in the future. The second of these recommendations to be given effect to, was the appointment, this month, of Mr. R. Eustace Montgomery as Chief Veterinary Advisor.

A third of the essential recommendations of the Committee was concerned with the establishment of adequate post-graduate training in tropical veterinary science and we are pleased to announce that the University of Edinburgh and the Royal (Dick) Veterinary College have decided to institute in October, 1930, a course for a Diploma in Tropical Veterinary Medicine (D.T.V.M., Ed.). Full details of this course are not yet available, but we understand that it will occupy two academic terms (October to March) and will comprise classes in Veterinary Parasitology and Entomology, Advanced Bacteriology, Meat and Milk Production and its Control, Feeding and Breeding of Animals in the Tropics, Epizöotology, personal Hygiene in the Tropics, and a number of other lectures and lecture-demonstrations on special subjects of importance to veterinary surgeons in tropical climates.

The course will be essentially a practical one and the larger part of the student's time will be spent in the laboratory obtaining a first-hand knowledge of the fundamental principles of veterinary science in the tropics. No attempt will be made to teach the practice of medicine, as this can only be adequately studied in the field abroad. The curriculum will be so arranged as to be suitable for the newly-appointed officer as well as for those who have already had some experience in the tropics. It falls naturally into two parts, and, while it is expected that most students will take both parts consecutively, it is possible for them to be taken independently. This arrangement has been made to suit the convenience of

colonial workers who wish to take the diploma during two leaves to this country. While the course is open to anyone, the diploma can only be taken by candidates who hold an approved veterinary qualification registrable by the Royal College of Veterinary Surgeons.

The veterinary graduate of the future who enters the colonial veterinary service will commence his active career with advantages undreamt of by his predecessors. A five years' professional education, a degree in science, and a diploma in tropical veterinary medicine will be his equipment. When one considers the invaluable work which has been done by those who preceded him, the potentialities for doing good constructive work will be enormous. Agricultural prosperity and public health will benefit immensely; and it is on just these two factors that colonial development mainly depends.

The University of Edinburgh and the Royal (Dick) Veterinary College have not only performed a good service to the Colonies; they have provided the veterinary profession with an opportunity of consolidating its position as one of the key professions of the Empire.

## From The Veterinarian,

June, 1830.

### Essays on Horse Medicine;

**Comprehending the Theory and Practice both of the French and English Schools.**

By O. P. Q.

*Abscess* means a tumour containing purulent matter, or in fact any *collection* of such matter. The term is said to be derived from the Latin (*abscedo*), signifying *to depart;* because parts which were before contiguous recede, to make room for the matter deposited.

*Strangles, quittor, poll-evil,* and *fistula,* are so many various examples of abscess; and to the accounts to be given of those diseases I must refer my reader for particulars, which, in course, will vary according to the nature of the case; it being my intention in this place to unlimit my observations to *abscess in general.*

Abscesses are of two kinds—*acute* and *chronic.* Whether it be from external injury, or from any internal cause, when inflammation attacks any particular part or place in which there exists cellular membrane, and is suffered to run on, or should resist the means that may be used to subdue it, that inflammation may be expected to be productive of abscess. The first effect of the inflammatory action is the effusion of adhesive matter, infiltrated with serum; hence the swelling, solidity, doughy feel, heat, and tenderness of the part. This semi-solid deposition becomes the nidus for the purulent matter, which first makes its appearance in the very centre of the tumour, being there deposited by the mouths of those blood-vessels that so recently effused the lymph or adhesive matter, but which now, from some unaccountable change of function, secrete *pus.* The purulent matter accumulating, presses against the sides of the solid matter inclosing it, and thereby occasions the absorption of the latter; in which way a cavity is formed, growing hourly larger and larger until the firm and solid tumour is transformed into a soft and compressible one, which the touch of the practitioner recognises to be an abscess. (*To be continued.*)

# Clinical and Case Reports.

## Rupture of the Prepubic Tendon.

By H. V. O'Brien, M.R.C.V.S., Rayleigh, Essex.

Case first visited on March 28th, 1930.

*Subject.*—Farm mare, 7 years old, and in good condition. Ten months pregnant.

*History.*—She had been kept at regular work up to the end of the ninth month of pregnancy, and was then allowed to go idle. She was given only a little walking exercise daily.

*Symptoms.*—These had set in two days before the veterinary surgeon was called in, and were as follows: œdema of the abdominal wall, most marked in the inguinal region and extending slightly under the thorax; back abnormally depressed, even allowing for the fact that the mare was heavy in foal; disinclination to move, but when once got going she improved; temperature normal; pulse slightly increased, but strong.

*Diagnosis.*—The premonitory symptom of rupture of the prepubic tendon.

*Treatment.*—Mag. sulph. and pot. nit. twice daily. Regular gentle exercise. Light diet of bran, hay and what grass she could get during the day. It being early in the year, there was not much grass, so in finding a little food she was getting sufficient exercise.

*Course.*—The mare was seen again on the morning of the third day. The œdema had spread forwards and there was a regular pouch, 3½ to 4 inches deep, hanging down between the fore limbs. Œdema over abdominal wall slightly increased in depth. The mare walked better, and beyond the fact that the œdema had increased, she was unchanged from when first seen. There was no evidence of immediate foaling. The same evening a call came to say the mare was down, unable to rise and apparently trying to foal. She was successfully foaled, but could never have given birth to the foal without the aid that she received. The uterus being displaced downwards, the pelvic brim formed an unsurmountable obstacle to the passage of the foal.

On the following day the œdema had greatly decreased, particularly between the fore limbs and under the thorax. The uterus was washed out and a pessary inserted. The mare was feeding well and appeared to be making very satisfactory progress. It was thought that rupture had not actually occurred, and as the exciting cause was now removed, the prognosis was considered to be favourable.

On visiting the mare a few days later she was found to be very ill. Temperature, 105° F.; pulse and respirations greatly increased. On vaginal examination the uterus was found to have slipped forwards so that the cervix could be only just reached when the whole arm was inserted into the vagina. The vagina itself was greatly ballooned and could easily have accommodated a fully-developed fœtus. The anterior part of the vagina was "well-shaped" and contained fluid up to a level, in front, with the cervix, which acted as an overflow into the uterus. This fluid was chiefly urine.

The abdomen had become greatly dropped, and there was a large, tense, hot swelling in the right side just inside the fold of skin at the groin. This was evidently

a rupture. While the veterinary surgeon was in attendance the mare made an attempt to micturate, but could not take up the normal stance for this action. The result was that the urine, instead of passing out through the vulva, flowed forwards into the vagina and thence overflowed into the uterus.

The mare was now suffering from rupture, complicated by uræmic poisoning, and as treatment was now out of the question she was condemned as a hopeless case.

This is my first experience of such a case, but from what I have read of this condition, I thought rupture was not likely to occur after foaling. It did in this case, but of course degeneration of the tendon and muscles might have developed to such an extent that rupture was inevitable.

## Oophorectomy in Cats.

**By H. S. Caldwell, M.R.C.V.S., Newcastle, Staffs.**

It is encouraging to find a few notes from a case book calling forth so many helpful comments from men far more experienced than I, and it is a pleasant task to reply to Major Hamilton Kirk's kind criticism of my description of a method of spaying kittens recently printed in the *Record*. The operation described applies, as stated, to kittens, and the best results, in my opinion, are obtained in kittens spayed before the first œstrum; in such cases I have not seen any ill effects from removing the ovaries without ligaturing above the ovaries or the horns of the uterus. In adult cats, I agree, it is advisable to ligature the uterus, or preferably, to remove the whole of the uterus at the same time.

In closing the wound it is, no doubt, better surgery to suture the peritoneum, muscle and skin separately, or in two layers as described by Major Kirk, but one suture answers well, in this process, and there is no trouble with non-absorption of cat-gut, which I have seen in some cases. The wound is very small and the flank is protected by the thigh muscles, which overlap it in the normal position. In one kitten the skin alone was drawn together with one suture, healing was rapid and the kitten could run about without inconvenience soon afterwards. As in Major Kirk's cases, suppuration is rare and results good.

I am well aware that there is no necessity to operate on both flanks, and other practitioners have mentioned this point to me, but, after trying both methods, I came to the conclusion that it is better to make a very small incision in both flanks (as in caponing, it is easier to do a simple job in each flank than a complicated operation in one). The uterus is seen on opening the peritoneum and is only drawn into the wound far enough to enable the ovary to be cut off, the intestines are scarcely seen, and not interfered with, as seems necessary when I try to trace the uterine horns to the other side of the abdomen; perhaps I have not acquired enough skill in that process.

In operations through the linea alba, another sequel to be guarded against is a hernia after the animal has apparently made a satisfactory recovery.

I have not used Avertin anæsthesia, and must thank Professor Wright for his convincing paper on the subject.

In conclusion, I am very grateful to Major Hamilton Kirk for publishing his experiences in the castration of female cats.

# Abstract.

[**Thoughts about Fæcal Examination, with Special Reference to the Hamburg Cover-Glass Method.** Dr. Ullrich, Clinical Assistant in the Veterinary School, Brünn. (*Prager Archiv für Tiermedizin*, 1929. Part A, No. 3 and 4.)]

Although the symptoms caused by certain kinds of parasites give a clearly-defined clinical picture, this is not the case with many parasitic worms and protozoa, and with many syndromes one cannot be sure whether the cause is, or is not, parasitic; as an example, periodic colic of the horse may be mentioned, which may be due either to nematode infection or to metastatic strangles abcesses in the lymph glands of the mesentery.

In doubtful cases an examination of the fæces serves to differentiate. It shows whether parasites are present or not; what kind of parasite is present and in what number. On the findings depends the type of treatment.

One may use natural preparations for examination, or else enrichment methods. In the former, one takes a little fæcal matter, mixes it with water and examines it between slide and cover glass. If unable to examine it immediately, it should be kept in weak formalin solution; otherwise, the eggs would develop while being kept and so make identification of species more difficult. Measurements of eggs vary very much and such are of little value in identifying them; they can be readily identified as to species by observing the number of segments in the eggs.

Eggs with few segmentation cells, two to at most eight, originate from *Ankylostomum duodenale*, the hookworm, dreaded cause of disease of mountain dwellers. Or from *Cylicostomum tetracanthum* of the horse. The Zrarer disease and the Angermund disease of foals are due to it. In the ox, eggs with less than eight segmentation cells come from Dochmiasis, with which there is wasting and diarrhœa. Ankylostomes also occur in the dog and silver fox, in which they are parasites greatly feared. Many species of intestinal strongyles have eggs with more than 16 segmentation cells. An example is *Hæmonchus contortus*. *Gongylonema scutatum*, a worm parasitic in the pharyngeal mucosa of the horse and ox, lays eggs that develop the embryo already after being laid (the embryo lies in the egg as a loop which moves actively).

Of nematode eggs can be mentioned the Trichotrachelida eggs, which are so characteristic as to avoid mis-judgment. They have a lemon shape, are light to dark yellow to brown and have two well-marked caps, which appear to be held in position in the manner of corks. A typical representative is *Trichuris affinis* from the large intestine of the ox; it is often seen on fæcal examination.

The so-called "enrichment method" has more significance than the natural preparation method. One need examine only a few enriched preparations to come to a definite conclusion as to the presence or absence of suspected parasites, while for the same purpose a very large number of natural preparations is necessary. Enrichment consists of collecting all the eggs or cysts of protozoa into a small area, whence they are easily secured for examination. The number of methods is very great and some of the older ones are rather complicated and time wasters, but now some rapid methods are available.

For the enrichment of eggs in fæces one uses two main methods, that of sedimentation or that of floatation. The former is the older one; with it a certain amount of fæces, diluted with water, is filtered and washed several times and then put into a tall glass so that the relatively heavy eggs collect at the bottom and can be brought out with a pipette. This method was not always good, owing to co-presence of fæcal particles, etc. The Teleman method avoided this and was for long the universal method used. In it the fæcal matter was shaken up with equal parts of HCl and ether and centrifuged. Three layers separated out, of which the lowest contained the worm eggs. Another and cheaper method employed centrifuging and passing through a sieve. The floatation method consists of flooding the fæces with a relatively heavy fluid, so that the worm eggs and protozoa cysts are carried to the surface. Advantages are: no centrifuge is necessary, the eggs are in a clean medium, and rapid diagnosis is possible. Disadvantages are: not all eggs react similarly well, so that a number of modifications for various species are called for. The first useful method was worked out by Fülleborn for the diagnosis of human Anchylostom eggs. He beat up in a glass a little fæces with 27 per cent. NaCl sol. and poured off the salt sol.; the eggs could be taken from the surface with a wire loop and examined. Nöller and Otten have improved this somewhat. Hobmaier seeks to accelerate the rising of the eggs by centrifuging. Other authors used 50 per cent. sugar solution for enrichment, but owing to its higher price and stickiness the writer gives preference to salt solution. Such methods may produce deceptive results unless one can examine the material promptly. The eggs sink again after some time. The preparation of material for the floatation method takes a little time also. On this account the writer recommends the Hamburg cover-glass method and states it to be the best for the practitioner. Fülleborn, helminthologist at the Institute for Ship and Tropical Diseases, is the originator of it.

Special sheet metal vessels are constructed, with a depression at the bottom in which the fæces are strewn and so despatched. The enrichment then takes place in the same vessel. As, however, a mixture of fæces with formalin is advantageous or even essential, these vessels may be dispensed with. We usually use porcelain crucibles of 50 c.c. capacity. Into these we put a hazel-nut-sized piece of fæces, either fresh or from a formalined sample, and rub it up well with concentrated saline sol., which is added in small quantities till the vessel is nearly full. Now a large cover-glass (22 mm.) is laid on the surface, where it floats. This can be so left while another sample is prepared. After about 20 minutes, the cover-glass is picked off with forceps, laid on the microscope stage and examined in the usual way. The eggs and cysts rise up and stick fast to the cover-glass. With this method one is not troubled with particles of fæces in the field.

One very great advantage of this method, also, is that one can make as good an examination 24 hours after enrichment as 20 minutes after; this is due to the strong adhesion of the eggs, etc., to the cover-glass, so that they do not sink again. This is an important point for the busy practitioner.

The writer has obtained better results with this method than with that used by Nöller and Otten with an "Erlenmeyer" vessel. The collection of eggs is not so certainly accomplished this way.

The floatation method, however, is not suited for all kinds of worm eggs. With saline sol., nematode eggs and coccidian cysts rise up, but cestode and trematode eggs, amœba, lamblia and balantidia cysts as a rule do not rise (with the exception of moniezia eggs and those of *Tænia serrata*, which rise). Exceptionally, too, globidia cysts rise to the surface; they occur in the abomasum of sheep and deer.

Cestode and trematode infection has only slight significance for the horse, and the salt enrichment is sufficient for diagnosis of equine cases. The same applies to fur-bearing animals, for which nematodes are principally pathogenic. For liver parasites an examination of the gall is of importance.

Till recently, there was not a good method of examining for liver fluke or for lungworm larvæ, and everyone who has examined ruminant fæces fresh, will know how difficult it is to demonstrate even a heavy infestation.

The waterglass centrifuge method of Vajda has improved matters here. This is the technique: 3 c.cs. of fæces (diluted) are put into cylindrical centrifuge glass and an equal amount of waterglass, of as high a sp. g. as possible, added; they are rapidly stirred up with a glass rod, centrifuged for half a minute and then a little material is taken from the surface with a glass tube, put on a slide and examined with or without a cover-glass over it.

Lungworm larvæ, certain nematode eggs, balantidia cysts and sometimes eggs of *T. echinococcus* of the dog react. Eggs of *Dicrocœlium lanceolatum* do not react. This method can be carried out rapidly and so is suited for examination of material in bulk.

The writer does not discuss any other methods, partly because some of them require the use of expensive material, and therefore will find less employment in veterinary medicine.

To conclude, the Hamburg cover-glass is good for nematodes and coccidia and the waterglass centrifuge method of Vajda for liver flukes and lungworms. These two are claimed by the writer to be the best of all enrichment methods because of their superiority with regard to cheapness, simplicity and efficiency.

J. T. E.

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## Export of Cattle and Forage to Jersey.

By an Act dated June 14th, the complete prohibition on the importation of cattle and forage from Great Britain and Ireland into Jersey, imposed by the Act of November 6th, 1928, has been removed. Cattle and forage may now be imported from the counties of Cornwall, Devon, Dorset and Somerset and from the port of Southampton, if accompanied by a sworn declaration as to the place of origin and a certificate from the Ministry of Agriculture and Fisheries that no outbreak of foot-and-mouth disease or cattle plague has occurred within 15 miles of the said place during the past six months. Further particulars and application forms for the Ministry's certificate may be obtained from the Office of the Ministry, No. 7, Whitehall Place, London, S.W.1.

# Divisional Report.

## Midland Counties Division, N.V.M.A.*

### The President's Address at Oswestry.

The Quarterly Meeting of the Midland Counties Division, N.V.M.A., was held at the Grand Hotel, Birmingham, on Tuesday, May 13th, when members and visitors were the guests at luncheon of the President, Mr. H. Tudor Hughes, of Oswestry.

There was a good attendance, among those present being Messrs. F. L. Gooch, J. R. Barker, W. H. Brooke, S. M. Woodward, E. O'Neill, T. Marriott, C. F. Parsons, W. F. Aston, J. M. Whyte, L. W. Heelis, G. F. Banham, W. Trigger, F. Chambers, J. Martin, T. Martin, G. R. Benbow, J. Cormack, P. Abson, H. Burrow, W. J. B. De Vine, P. D. Baylis, A. A. Forsyth, C. Renfrew, W. L. Sheffield, T. L. Brain, W. E. Ison, R. Over, T. H. Hobson, G. B. Forsyth, J. C. De Vine, H. C. Gregory, A. Mackenzie, R. Hughes, J. Robertson, J. W. Conchie, H. W. Steele-Bodger, H. W. Dawes, and the Hon Secretary (Mr. H. J. Dawes). The visitors included Councillor David Rose, Dr. F. C. Lewis, Mr. G. T. Matthews, and Mr. G. S. Lawrence.

Apologies for absence were received from Sir John McFadyean, Sir Gilbert Barling, Professor Hobday, Professor Macqueen, Messrs. R. L. Green, G. Leader, W. T. Olver, E. Ringer, C. J. Byner, L. C. Maguire, L. C. Tipper, M. Tailby, T. S. Bowden, M. Sadler, C. S. Hunting, R. Lake, J. E. Hutchinson, R. Murray, J. J. Burchnall, R. McGregor, T. Spencer, E. W. Parkes, G. K. Miles, T. J. Brain, J. R. Carless, C. G. Allen, H. Fairer, E. R. L. Phillips, W. W. Grasby, W. T. Dale, G. Eaton, R. Simpson, W. C. Blackwell, H. B. Hiles, A. W. Findlay, J. A. Connell, O. V. Gunning, D. Forwell, H. C. Caldwell, W. F. McConnell, T. Young, E. Franklin, C. S. Cockburn, G. V. Tyerman, and J. C. Clifford and others.

At the conclusion of an excellent repast, Mr. Gooch proposed the health of the President, whom he thanked for his hospitality that evening, adding that Mr. Tudor Hughes was evidently determined to maintain the best traditions of his office. (Laughter and applause.)

The President, in reply, said he appreciated the honour that had been conferred upon him, and he took it as a personal compliment that so many members had turned up.

The toast of "The Visitors" was submitted by Mr. De Vine, and acknowledged by Councilor Rose, who said that the corporation of Birmingham was alive to the importance of its veterinary department. He remembered Mr. John Malcolm as chief officer, and in his successor, Mr. De Vine, they had a capable and conscientious servant who was doing a great work in the matter of public health. (Applause.)

### The Business Meeting.

The business meeting was of short duration, an interesting outside programme having been arranged.

*Nominations.*—Three nominations for membership of the Division were received, namely: Mr. William Frederick Wilson, of Hodnet, Market Drayton, proposed by Mr. Mackenzie; Mr. A. B. Over, of Rugby, proposed by the Hon. Secretary, and Mr. M. L. Dartnell, of Cheltenham, proposed by Mr. Parsons.

*Election of Council R.C.V.S.*—The Hon. Secretary read a letter from the Mid-West and South Wales Division of the National Veterinary Medical Association, soliciting votes on behalf of their candidates for election to the Council of the Royal College of Veterinary Surgeons, namely, Mr. J. C. Coleman (Swindon) and Mr. W. D. Rees (Glamorgan).

The Hon. Secretary reminded the meeting that the Midland had two nominees of their own, Mr. R. Hughes, of Oswestry, and Mr. J. Cormack, of Coventry.

Mr. R. Hughes said they were on the eve of great changes. The Council proposed to adopt a five years' system of training, because they wanted the general practitioner of the future to be as proficient in the field as in the laboratory. He thanked his fellow members of the Midland Society for their support, and promised to watch the best interests of the profession if he were returned.

Mr. Cormack said he had allowed his name to go forward for nomination because he believed the general practitioner required the fullest possible representation on the Council. He personally was interested in the profession from other angles also, such as veterinary education, and if elected he would do his best to bring credit to the Council and to the Association which was sponsoring him.

On the motion of the Hon. Secretary, seconded by Mr. Martin, senior, the Association pledged itself to support its own nominees first and to consider favourably the appeal for support from the Mid-West and South Wales Division.

#### President's Address.

This being the first meeting since he was elected to the position, the President (Mr. H. Tudor Hughes) delivered his inaugural address in the following terms:—

As it is an established custom in the Midland V.M.A. for the President to deliver an address on the occasion of the first meeting following his election, I must ask your indulgence whilst I fulfil the demands of that ancient usage (embodied in Rule XIV). In the first place, I must thank you for the distinction you have conferred upon me in appointing me to the highest honour it is in your power to bestow upon any of your members; and may add that, if such were possible, it is all the more to be appreciated in view of the fact that it has fallen to my lot many years before I might consider it my due.

My thanks are also due to you for the confidence you have expressed in appointing me as your delegate to the Congress of the Royal Sanitary Institute in June, and the International Veterinary Congress to be held in London in August, both of which functions it shall be my earnest endeavour to attend.

This Association, which is one of the oldest and strongest Divisions of the N.V.M.A., having been inaugurated 1866, has been presided over by a succession of very worthy men, and is still privileged to have Mr. H. J. Dawes as its Secretary, and his long experience in that capacity, where he has always shown the greatest tact combined with alertness, has with great consistency served to keep the members of our Association in touch with modern developments and the application of new discoveries. In all this, and especially in the matter of surgical demonstrations,

* Received on June 12th

this Association has for very many years—in fact, I believe I would be correct in saying from its foundation—been very fortunate in enlisting the good-will and active co-operation of the chief veterinary officers of the City of Birmingham. In this connection you will all remember the late Mr. John Malcolm—a most genial and lovable man—and the zeal and enthusiasm which he devoted to the affairs and welfare of this Association. In his successor, Major Brennan De Vine, we happily find the same qualities even more actively expressed, as though the virtue in its passage had become exalted, proof of which we shall very soon enjoy, as to him we are indebted for the very interesting programme arranged for this afternoon. This, by the way, is no isolated instance of the devotion of the C.V.O., but rather a regular example, and it may be truly said that though the Grand Hotel may be our talking shop, Holliday Street Wharf is our workshop. (Applause.)

When I first joined the Midland, and Mr. Dawes had duly inscribed my name on the roll as a new member, I next met Mr. Brooke, who was ready to receive my entrance fee with such courtesy as to make me feel that he felt the obligation was more on his side than mine, at which type of psychological illusion he is still as great an adept as ever. (Laughter.)

From the Rules of the Association, which have already been read, you will have remarked the objects of our Association, and I should here like further to stress the benefits of membership, and to urge every member to book the date of our meetings on his diary as a matter of primary professional importance, for it is possible that our meeting may miss the absentee quite as much as he may miss the meeting. In my view, the fact that our proceedings will in due season be reported in the *Veterinary Record* is by no means an adequate compensation for absence from our quarterly meetings, for in the printed page one has but an epitome of what the speaker said, which may give no idea of the way he said it; and should there be some individual problem or difficulty, one has no opportunity of gaining enlightenment by participation in the discussion or possibly subsequent private conversation. I must acknowledge that I have myself reaped great benefit on many occasions in both these ways.

It would be a great gain to the unity and strength of the profession if every member belonged to the N.V.M.A. and also took an active interest in the Division to which his particular part of the country belonged. (Hear, hear.) In addition to this scientific and practical character, our meetings are also endowed with a social and friendly atmosphere which promotes a fraternal feeling amongst us all, and tends to make us help one another whenever and however we can; but, should occasion for differences of opinion arise—as may sometimes happen—our judgment of one another may be expected to be tempered with common sense and good humour, instead of the acrimony and censure which might unhappily lead to bitterness and estrangement.

You will be aware of the proposed extension of curriculum to five years, by which it is to be hoped a larger measure of clinical instruction will be afforded, so that we may have an army of able practitioners in the field as a impregnable front line to the profession.

You will have noticed that in the last few years the social attraction of some of our meetings has been greatly augmented by the presence of the ladies; in fact, their arrival may be said to be the making of our Annual Dinner, which has thereby been transformed into a social gathering to which we look forward every year with the greatest enthusiasm and anticipation. As I have had the privilege of examining the students for some few years, and have observed the increasing number of women students, I may perhaps be allowed to remind you that their presence at all our meetings is probable in the not distant future, when they will claim to attend as M.R.C.V.S., and I look forward to their attracting a greater attendance at our general meetings, as they have done in the case of the Annual Dinner.

The annual subscription of our Association is still 10s., one of the few good things still obtainable at pre-war price, which works out at 2s. 6d. per meeting, and when you reflect on all that has been brought forward for our instruction, enlightenment and advancement I am sure you will marvel how it can be done for the money and that the subscription has not been increased long ago. One reason, of course, is that the Secretary and Treasurer still remain on at the old figure and regard their duties as a labour of love.

For this, more than any other reason, I am surprised at finding in our last Balance Sheet, for the year ending December 31st, 1929, that we have the misfortune—I might almost say disgrace—of having "Subscriptions in Arrears" figuring in that statement at all. To make matters still worse, the situation does not appear to be of recent and sudden development, as it traces back for a period of six or seven years, and is as follows:—

| | | | £ | s. | d. |
|---|---|---|---|---|---|
| 49 | members have not paid | 1929 ... ... | 24 | 10 | 0 |
| 26 | ,, ,, | 1928 ... ... | 13 | 0 | 0 |
| 26 | ,, ,, | 1927 ... ... | 13 | 0 | 0 |
| 20 | ,, ,, | 1926 ... ... | 10 | 0 | 0 |
| 4 | ,, ,, | 1925 ... ... | 2 | 0 | 0 |
| 5 | ,, ,, | 1924 ... ... | 2 | 10 | 0 |
| | Total Arrears of Subscriptions ... | | £65 | 0 | 0 |

With a strength of 129 members, this represents a burden of about 10s. each, but in reality is more than that, as I am afraid that all those cases that need operating on in the pocket for "long wind" are included in the list.

According to Rule VI, our plight ought not to be as bad as all that; but no doubt leniency has been exercised to the limit, and even beyond it, in the expectation that such a debt of honour would not be allowed to go unpaid.

I sincerely hope that such an unpleasant caudal appendage will not disfigure the Balance Sheet for 1930.

With such advantages to be gathered for the amount of the subscription, it is a wonder that every member of the profession within the area of the "Midland" is not a member of it. To the achievement of such an end we must all bend our energies, and that without delay, as with the prevailing and rapidly-developing tendency towards amalgamation and rationalisation, and the speedier decisions that need to be taken affecting the welfare of large numbers of individuals, unless we stand shoulder to shoulder, and shield to shield as did the soldiers of ancient Rome, we shall not be able to withstand the pressure that may be brought to bear upon us from without, nor extend and consolidate the position we hold to-day.

Indeed, until a full and overwhelming majority of the

profession are members of the "National," the position of those who are cannot be said to be stable or secure.

We must all of us feel a debt of gratitude to those who keep watch and ward over our interests and welfare in the Council of this Division to begin with, and still more in the Councils of the R.C.V.S. and N.V.M.A. Unlike those who represent us in the Council of the Nation, they have not yet voted themselves even the travelling expenses that they must incur in attending their regular meetings for the good ruling and governing of the profession in the one case, and in both for the safeguarding and extending of its privileges. When, in addition to all this, they give so freely of their time and services, we are, in no mere metaphorical sense, very much indebted to them. (Hear, hear). There was a time when it might have been deemed most improper for a proposal to have been made in more than one well-recognised direction, but times change and ourselves with them, and as at present there seems to be a tendency towards a reversible equation: we may feel that what the head will not propose to the body, the body will need to propose to the head. The matter is one for careful and thorough consideration, both on the part of our own and other Divisions of the N.V.M.A.

This afternoon we are to enjoy the privilege of visiting the Bacteriological Laboratory of the City of Birmingham, and also the Wast Hill Dairy Farm, King's Norton, and later the Birmingham Co-operative Dairies, where we shall be hospitably entertained by the Birmingham Co-operative Society.

I think you will agree that it is an excellent thing that we should thus, and in other ways, establish contact with other bodies having joint, though not necessarily overlapping interests, and avail ourselves of such opportunities for interchange of views and opinions.

The inauguration of the Section of Comparative Medicine in the Royal Society of Medicine has given an impetus to the advancement of our joint interests with the medical profession, and the fruits of close co-operation are already to be seen in the elucidation of the cause of canine distemper and the preparation of a successful method of prophylaxis, by Laidlaw and Dunkin, and the veil of mystery in the etiology of milk fever seems now to have been lifted, thanks to the persistent and patient labours of Dryerre and Grieg.

Let us hope that these examples, and there may be others that have not occurred to me at the moment, may prove but the first fruits of a harvest of good things yet to come; for the greater the number of specific remedies at our disposal the more effective our services are likely to prove and the more to be sought for.

As a profession, I am sure that we are all grateful to the editor and proprietors of *The Field* and the great number of sportsmen and dog lovers whose active sympathy and financial support they were able to enlist in providing the funds for distemper research, and we also acknowledge with hearty congratulation the labours of those engaged in the research work.

This furnishes a concrete example of the relationship between research and finance, for without the latter research cannot proceed. With all the side issues that have to be cleared up to discover phenomena that may be mutually related, research work is likely to prove more expensive in the future than has been the case in the past, and one of the first essentials to those engaged in the work is that their minds should not be perplexed by financial embarrassment or restricted supplies in their requirements.

In the diseases of the larger animals, experimental research work must of necessity prove more expensive on account of their increased cost, and the much greater expense incurred in their housing and maintenance. It is therefore doubtful if much progress can be anticipated until more generous support is forthcoming for the assistance of our veterinary colleges and research institutes.

To-day, too, we are coming into touch with important representatives of the dairy industry, including the Co-operative Society. As you well know, the Co-operative Society is an institution that is very strong in the North and the Midlands, and must number hundreds of thousands in its membership, and wield a very considerable influence in the economic and political life of the country. Their enterprise and boldness in tackling dairy farming on the scale upon which they have embarked is very commendable, and indirectly, I hope, will yield even more profitable results than may appear in the Profit and Loss columns in the statement of annual accounts. In this way:—The Co-operative Society's farming is conducted on a larger scale and accounts are probably more precisely kept, audited and analysed than is the case with the individual farmer, and their results are worthy of the greatest consideration as an accurate index of the state of agriculture in the country generally, and should receive the serious attention to which their weight entitles them, from those who are in authority. From the number of its members in the industrial urban centres, the Co-operative Society forms one of the best channels for the transmission of information and knowledge as to how matters are progressing in the rural areas, and will, I hope, serve actively to enlist public opinion in the support and strengthening of agriculture. Apart from those directly engaged in it, there are none who more than ourselves keenly desire a prosperous, strong and steady agriculture, which, it is almost axiomatic to repeat, constitutes the backbone of any and every country in the world. (Loud applause.)

Mr. Parsons moved a vote of thanks to the President for his able address. They knew Mr. Tudor Hughes to be a practical veterinarian and an earnest student, and he had given evidence of that that afternoon.

Mr. Woodward seconded the motion, which was carried with acclamation.

*Information Wanted.*—Mr. Brooke said that the Natural History Museum at Birmingham was anxious to show the history of the trouble caused by the warble fly. For any specimens or data which members of the Association could supply, the Museum would be very grateful.

*Two New Instruments.*—Mr. Whyte exhibited two new instruments which he had had made for himself. One was a hook which, by means of a screw cap, could be made either blunt or sharp at the end. In calving cases, if the calf were alive the blunt end could be used with safety. The other instrument was a simple electrical apparatus for the removal of tumours from cows' teats.

### A Birmingham Laboratory.

Chars-a-banc were in waiting to convey members to the City of Birmingham Bacteriological Laboratory, at Hockley. Here were explained to them, by Dr. Lewis, the

methods adopted for the detection of tubercle bacilli in milk. It was a very thorough process, with the best means available.

The PRESIDENT formally thanked Dr. Lewis for his kindness, and said what they had seen must strengthen their confidence in the work of the bacteriologist. He was personally glad of the opportunity of making first-hand acquaintance with this important branch of hygiene.

### A "GRADE A" FARM.

Next, a move mas made to Wast Hill Dairy Farm, King's Norton, where a herd of "Grade A" cows was inspected. It belongs to the Wast Hill Dairy Co., and everything was on the most scientific and up-to-date lines.

### A CO-OPERATIVE DAIRY.

Finally, a visit was paid to the Dairy of the Birmingham Co-operative Society in the heart of the city. The manager, Mr. G. S. LAWRANCE, acted as guide, and the scope and character of the dairy was in the nature of a revelation. About 10,000 gallons of milk per week are dealt with. The pasteurisation plant and the machinery for cleaning churns and washing and filling bottles were closely inspected, and explained by Mr. Lawrance.

At the close, the Co-operative Society entertained the party to a sumptuous tea.

The PRESIDENT moved a vote of thanks to the Society for their hospitality, and congratulated them on the possession of such a well-equipped dairy. He was inpressed not only with the wonderful labour-saving machinery, but with the high standard of cleanliness that was maintained. The whole thing was marvellously planned, and after hearing Mr. Lawrance's masterly explanation, scientific and mechanical, it was evident that it was the product of his own genius.

Mr. HOWARD DAWES, in seconding, said their experience that afternoon would be a memorable one. The Society were to be congratulated on having in charge of the dairy a man of Mr. Lawrance's administrative ability. He had explained everything very clearly, and shown what could be done in the distribution of pure milk.

Mr. LAWRANCE, replying on behalf of the Society, said they were pleased to see so many veterinary surgeons, whose interest in the question of a pure milk supply was professional. His dairy was like a dream come true. , It was the sort of place he wanted but never hoped to get. The Society, however, gave him *carte blanche* in planning and equipping it; and nobody but himself saw the architect until the opening day. He was certainly very proud of his achievement. The production and distribution of milk was a vast problem which they had been trying to solve for years. It began at the farm and at that stage was in the hands of the veterinary surgeon, who could and did do much to educate the farmer. The farm they had visited that afternoon was an exception, and he longed for the time when it would be the rule.

The Hon. SECRETARY moved and Mr. BROOKE seconded a vote of thanks to Mr. Brennan De Vine for making the arrangements for the afternoon's programme.

Mr. DE VINE, responding, said the credit was not all his, but anything he could do at any time for the Midland Association was a pleasure.

H. J. DAWES, *Hon. Secretary.*

## National Horse Association.

### AWARDS FOR BRAVERY.

At a Council meeting of the National Horse Association of Great Britain, the Council approved of the report of the Special Committee who had investigated the various acts of bravery submitted under the scheme whereby awards are made when gallantry has been exhibited in saving or attempting to save the life of horses and ponies. The following awards were made:—

Gold Medal to Mr. J. T. M. Bradley (Farm hand) of Torksey, Lincs., who attempted to get three horses off the railway line in face of the approaching Liverpool-Harwich boat-train. One horse was frightened off the line, and another horse was being led off when the express cut it in two, driving Mr. Bradley into the hedge.

Silver Medal to Master John Burke, aged 14 years, of Halifax, who stopped a runaway pony at considerable risk to both the boy and pony.

Silver Medal to Constable Fish, of the Port of London Authority, who stopped a runaway horse in the Royal Victoria Dock at the brink of a 10 foot drop.

Certificates of Merit for acts of bravery were also awarded to Constable Morton (Port of London Authority), Constable Clare (Mounted Branch), and Constable Brandon, of the Metropolitan Police, and to Mr. George Sweeting, of Mile End Road.

It was reported to the Council that Mr. Nigel Colman, M.P., on behalf of the National Horse Association, prepared an amendment for the Road Traffic Bill, which was considered by the Standing Committee dealing with the Bill and finally agreed to in a slightly altered form, *viz.*, "It is hereby declared to be the duty of a Highway Authority to provide wherever they shall deem it necessary or desirable for the safety or accommodation of ridden horses or driven livestock, adequate grass or other margins at the sides of roads under their control."

A second amendment was also prepared to deal with the speed limit to be imposed on motor horse boxes. Under the Bill they would have been classified as "Goods vehicles," and therefore limited to 20 miles an hour whenever over 2½ tons in weight. As the great majority of horse boxes, from two-horse boxes upwards, weigh over 2½ tons, this limit would have been imposed upon them. As, when the Bill become law, it is intended that the speed limit shall be strictly enforced, it was felt that this imposed a severe disadvantage on motor horse transport. An amendment was therefore drafted by the National Horse Association, putting motor horse boxes in a separate category, and allowing them, if fitted with pneumatic tyres, a speed of 30 miles an hour, which is the same maximum as that for passenger chars-a-banc under the Bill.

The amendment was considered in Committee on May 29th and proposed by Major Glyn, M.P. The Minister of Transport agreed to accept it.

Sundry recommendations as regards horses on highways were discussed in Council, and it was resolved to send to the Minister of Transport a list of suggestions which might be included in the proposed Highway Code.

Lieut-Colonel Percy Laurie reported that 44 Societies had applied for the Silver Medal in the Children's Riding Classes, and that nine medals would also be offered for Shoeing Competitions.

Sir John Moore reported that publicity poster stamps were available for use on correspondence, and that breeders of the following breeds of horses—Shire, Suffolk, Clydesdale, Hunter and Thoroughbred, were now utilising stamps depicting the head of the breed in which they were interested. Two million stamps had been issued.

Action had been taken through members in connection with several Borough Councils who were investigating the costs of horse and motor traction, with satisfactory results in the majority of cases.

The Chairman stated that it was most advisable that the latest information as regards the use of the horse should be brought to the notice of the public, and hoped that all members would supply the Publicity Committee with interesting items affecting horses. The Association was being

daily approached for articles and information on horses.

Sir Walter Gilbey, who was re-elected Treasurer, reported that the balance on Current Account was £313, with £427 on deposit. Accounts amounting to £135 were discharged, and although heavy expenditure had been authorised, the financial position was deemed sound, in view of the fact that only half the financial year had elapsed, and a considerable number of new members was being received.

### In Parliament.

In the House of Commons recently the following questions and answers have been recorded :—

ANIMAL WELFARE.

Mr. FREEMAN asked the Financial Secretary to the Treasury whether any grants were made from the Exchequer for the purpose of the welfare of animals during the last financial year other than for the expenses of inspectors under the Cruelty of Animals Act; and, if so, how much, and to whom they were paid?

Mr. PETHICK-LAWRENCE: Separate provision is made in the Estimates for the salaries and expenses of inspectors appointed under Section 109 (3) of the Coal Mines Act, 1911, "for the purposes of examining into the care and treatment of the horses and other animals used in mines."

Expenditure under this head in the last financial year amounted to approximately £4,750. In this matter there is a considerable amount of work falling on general inspectors of mines and in connection with prosecutions, but it is not possible to give even an approximate estimate of the cost of these services.

Various other measures are directed wholly or partly at the humane treatment of animals, *e.g.*, the Importation of Plumage (Prohibition) Act, 1921 (administered by the Board of Trade and Customs and Excise); orders by the Ministry of Agriculture dealing with the care and protection of animals during transit, for instance the Conveyance of Live Poultry Order and the Exportation of Horses, Asses and Mules Orders. The work involved by the above is carried out by the officers of the appropriate departments in the course of their duties. The cost, therefore, though no doubt very considerable in the aggregate, cannot be distinguished separately.

SHEEP SCAB.

Mr. DE ROTHSCHILD asked the Minister of Agriculture whether, in view of the inconvenience caused to purchasers of sheep who desire to remove them from one county to another, he intends to take any steps to establish uniformity with regard to dipping orders; and whether, in view of the prevalence of the disease of sheep scab, he will consider the establishment of a universal double-dipping order?

Dr. ADDISON: Uniformity of local regulations in regard to sheep scab has already been obtained to a large extent by the Ministry by encouraging neighbouring counties to arrange themselves in a group and to pass identical regulations. The Midland Group, for example, contains 31 counties. The question of a general double-dipping order was thoroughly explored in consultation with agricultural bodies in 1926, and it was then agreed that such an order was not necessary, and that in case its enforcement would not be practicable. The position has not changed since that date.

PAY AND PENSIONS.

Marquess of TITCHFIELD asked the Chancellor of the Exchequer whether, in view of the fact that the fighting services are not so well treated as regards bonus and pensions in relation to the cost-of-living as are the Civil Service, he will cause an inquiry to be held into this question with a view to equalising the conditions?

Mr. PETHICK-LAWRENCE: No, Sir. Seeing that the pay and pensions of the rank and file of the three fighting services are not subject to adjustment with the cost-of-living, and only 20 per cent. of the pay and retired pay of officers is so adjusted, I cannot accept the Noble Lord's statement of fact.

# Notes and News.

The Editor will be glad to receive items of professional interest for inclusion in these columns.

## Diary of Events.

July 1st.—N.V.M.A. Quarterly Meetings. Committee Meetings at 2 Verulam Buildings, Gray's Inn, W.C.1 :—Appointments Committee, 10 a.m.; Veterinary Officers' and Public Health Committee, 10.45 a.m.; Joint Meeting of Veterinary Officers' and Public Health and Parliamentary Committees, 11.45 a.m.; Organising Committee, 12.15 p.m. *Council Meeting*, 3 p.m., at 10 Red Lion Square, W.C.1.

July 2nd.—R.C.V.S. Quarterly Meetings.

July 3rd.—R.C.V.S. Quarterly Meetings.

July 3rd.—Meeting of the Central Division, N.V.M.A., at 10 Red Lion Square, 6.30 p.m.

July 4th.—R.C.V.S. Quarterly Meetings.

July 7th.—R.C.V.S. Membership Examination commences.

July 8th.—Summer Outing of the Derbyshire Division, N.V.M.A., to Haddon and Chatsworth.

July 18th.—Meeting of the Mid-West and South Wales Division, N.V.M.A., at Bridgwater.

July 24th.—Meeting of the Eastern Counties Division, N.V.M.A., at Cambridge.

### AUGUST 4th to 9th.—11th INTERNATIONAL VETERINARY CONGRESS, CENTRAL HALL, WESTMINSTER.

## Eleventh International Veterinary Congress, August 4th-9th, 1930.

The Membership of the Congress now includes representatives of 57 different nations. The Ambassadors and Ministers plenipotentiary accredited to this country have consented to act as a Committee of Honour, which will also include the Minister of Agriculture and the Lord Mayor of London. Everything points to this being a record Congress as regards the importance of the subjects discussed and the widely representative character of the members. All that is now necessary to make it a great success is a greatly increased enrolment of members from Great Britain and Ireland.

The cheap railway fares for the return journey to London (single fare and one-third) are now made available from August 1st to 16th. All enrolled members will receive from the General Secretary a special Voucher entitling them to this concession. Members travelling from the same district might well arrange through the Secretary of the local Division to form friendly parties so

as to secure comfortable travel. Particulars and forms of applications for membership have already been sent to all members of the College, but further copies can be obtained of the General Secretary at 10 Red Lion Square, London, W.C.1.

The Membership Subscription of 30s. (Ladies 5s.) entitles to a full copy of the proceedings, which will be published in three volumes, and to admission to the social functions of which we have already published particulars. The only festivities for which an extra charge will be made are the Congress Dinner, and the excursions, of which details will shortly be announced.

### Resignation of Colonel Brittlebank.

Thirty Years' Service to Manchester.

The Manchester Corporation Public Health Committee, at a meeting on June 17th, accepted with regret the resignation of Lieutenant-Colonel J. W. Brittlebank, the city's chief veterinary surgeon.

"Colonel Brittlebank, who for the last 30 years has been directly responsible for the purity of Manchester's milk supply, has much more than a local reputation," says the *Manchester Guardian*, in making the announcement. "He was associated with the late Professor Delépine in bacterial researches which became world-famous, and have formed the basis of much of the modern preventive medical work in relation to milk supply. He has an intimate knowledge of farmwork and the conditions of milk production, and it is largely as a result of his influence among the farmers in the areas upon which Manchester depends for its milk that the city's supply has been so free from any taint of tuberculous infection. Colonel Brittlebank is the only member of the Royal College of Veterinary Surgeons who, during this generation at least, has been elected to the presidency on two successive occasions.

"Miss M. Kingsmill Jones, the Chairman of the Public Health Committee, announced at the close of the meeting that the committee would consider immediately what steps could be taken to express most fittingly their appreciation of Colonel Brittlebank's distinguished services to the city. Dr. Brittlebank does not indicate in his letter of resignation what he intends to do in the future, but it is understood that he has accepted another appointment."

### Army Veterinary Service.

London Gazette—War Office—Territorial Army.

June 20th.—Lieut. W. S. Gordon retires on reduction of estabt. (May 31st).

### Great Britain's "International" Success.

The competition for the King George V. Gold Cup for jumping by military officers of any nation was the chief item of a varied programme arranged for the gala performance at the International Horse Show at Olympia on Monday. Those present witnessed a skilful exhibition of jumping by officers representing five nations. The trophy was won for Great Britain by Lieutenant J. A. Talbot-Ponsonby, 7th Queen's Own Hussars, on Chelsea, a 12-year-old brown mare.

### Personal.

*Appointment.*—Mr. A. Le Sueur, M.R.C.V.S., of 17 Duhamel Place, St. Helier, has been appointed Veterinary Inspector to the States of Jersey. We note with interest, also, that Mr. Le Sueur has been selected to judge the female classes in the Jersey cattle section at the forthcoming show of the Royal Agricultural Society to be held at Manchester, July 8th-12th.

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*Colonel C. E. Rabagliati.*—Our readers will be glad to learn that Major D. S. Rabagliati's brother, Colonel C. E. Rabagliati, whose skull was fractured when his car overturned among the crowd at Brooklands six weeks ago, when two persons were killed and 20 injured, has been able to leave Weybridge hospital.

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*Mr. H. C. Wilkie's Auditory Studies.*—The Royal Society (of England) recently placed at the disposal of Mr. H. C. Wilkie, F.R.C.V.S., of Penzance, a renewal of the grant made to him last year (1929-1930) in aid of a study of the comparative anatomy of the auditory organ, an interim report, dealing with certain new results obtained, having been presented to the Royal Society in April last.

### H.M. Stationery Office Publications.

The undermentioned have been published recently. Copies can be purchased though any bookseller, or directly from H.M. Stationery Office, at the following addresses:—London: Adastral House, Kingsway, W.C.2, and 28, Abingdon Street, S.W.1; Cardiff: 1, St. Andrew's Crescent; Manchester: York Street; Edinburgh: 120, George Street.

| | Price Net. | Post Free. |
|---|---|---|
| | s. d. | s. d. |
| Agriculture and Fisheries, Ministry of:— | | |
| Diseases of Animals:— | | |
| Branch Circular Letter, No. 147. Control of Dogs Order of 1930. To all Local Authorities, June 5th, 1930. (24-9999-00-00) ... ... ... | 0 1 | 0 1½ |
| Civil Service Commission:— | | |
| Examination Papers:— | | |
| Agriculture and Fisheries, Ministry of:— | | |
| Veterinary Inspector. Pamphlet containing the Question Papers of an examination held in March, 1930. (25-0022-00-30) ... ... | 1 6 | 1 7 |

### Sex Determination in Poultry.

Experiments in Crossing.

A correspondent writes to *The Times*:—

After the announcement of Professor Punnett's discovery of sex-linkage in a fixed breed, which appeared in *The Times*, it may seem like retrogression to consider the possibilities of sex-linkage by means of crosses; but some particulars which have recently been circulated regarding experiments at the National Institute of Poultry Husbandry are of interest because they emphasise the limitations of crossing for sex-linkage, and they indicate the importance of supplying the commercial egg-producer with stock from which he can hatch chickens whose sex can be detected at birth. Under changing economic conditions it has become apparent that the rearing of light breed cockerels until the sex can be determined is waste of labour and a source of loss, and students of commercial economy visualise the replacement of the pure White Leghorn either by a pure breed carrying sex-linkage or by suitable crosses from which we can produce pullets of similar character to the White Leghorns.

Therefore, although the experiments at the National Institute have not advanced the study of economic production

to any measurable extent, they are of interest because they are based upon a sound principle. They were intended primarily to discover a cross or crosses between light breeds from which the chickens would show sex-linkage in a form easily identifiable by the ordinary poultry-keeper. For example, in 1928 a cross was made between a White Bresse male and White Leghorn females, with the idea that sex-linkage would be shown in the shank colour. The results, however, did not reveal sufficient accuracy to make the cross commercially useful, either when the chicks were hatched or during the first two weeks. Then in 1928-29 a cross was made between a Black Minorca male and White Leghorn females, though neither in shank nor in eye colour did the chicks show sufficient distinction for sex determination. The popular Black Leghorn-Barred Rock cross gave excellent results, the sexing in every case being correct; but if the purpose was to obtain a reliable sex-linked cross between light breeds this did not come into the category, so a trial was made with Black Leghorn-Cuckoo Leghorns It would generally be assumed that this cross would show sex-linkage in the same way as the Black Leghorn-Buff Rock—that is, by means of a light-coloured spot on the head of each male chick. It was noticed, however, that one hen gave mismarked chicks, which marred the accuracy of the experiment; and it can only be assumed that this particular hen was not a pure barred one. The proportion of errors in sexing the chicks from this cross, nevertheless, conveys the impression that it is not so dependable for commercial purposes as it has hitherto been supposed to be.

Reference is made to Dr. te Hennepe's method of sexing day-old ducklings by detecting the presence or absence of the male organ; the experiments were made to discover whether the sex of chickens can be ascertained by the same means. The conclusions are of considerable interest. The Japanese have devoted some attention to this method of sex-determination, and it is probable that more information will become available during the World Poultry Congress in July.

### Horns in Cattle.

The predominant breeds of cattle would look unattractive if they were bereft of their horns. Horns may be relatively useless in actual marketable value, but in the Shorthorn, the Hereford, the Jersey, or the Guernsey, for instance, the shape and colour of the horns are interpreted as implying qualities of supreme importance to owners of line-bred stock. The horns, as well as the colour, the skin, and the "touch," of an animal may denote utility merits which owners wish to cultivate and have proved to be of especial significance. In view of their value, therefore, it is not to be expected, or urged, that breeders of pedigree stock would be disposed to listen to suggestions for curbing the growth of horns. Breeders of Ayrshires have endeavoured to make dehorning popular, but with only moderate results, and similar indifference is to be anticipated among owners of other horned breeds. Yet the owners of commercial stock find horns in their cattle exceedingly troublesome, and often wish they could be removed. Heifers and young cows running in sheds together are particularly harmful to each other. Bullocks are less ready to use their horns against their comrades, although they, too, are better if they are without the temptation to employ such dangerous weapons in this way. Dehorned cattle can be housed more closely and with less risk of injury and suffering than is practicable in the case of horned animals, and this point is particularly important in the case of heifers. For this reason the practice of dehorning, or of stopping the growth of horns in calves by nipping off the point of the horn with a knife and rubbing the part with caustic soda, is to be encouraged. The breeder, of course, has to consider his market and spare heifers that are to be grown into dairy cows—the market still preferring to see the animal intact—but, short of this point, dehorning at the time and in the manner indicated, is extremely advisable.—*The Times.*

### Veterinary Surgeon's Claim.

County Council Sued for Fees.

Sheriff Brand, in Dumfries Small Debt Court on June 17th, dealt with an action at the instance of Alfred James Milligan, M.R.C.V.S., Ednam Street, Annan, against the County Council of the County of Dumfries, as the Local Authority, in which pursuer sued for the sum of £4 7s. 6d., being fees due by the defenders to the complainer in respect of notifications under the Animals (Notification of Disease) Order of 1919 and the Tuberculosis Order of 1925, conform to account for professional attendance and medicine, £4 7s. 6d. to November 12th, 1929, £2, and to account rendered, £2 7s. 6d. Pursuer was represented by Mr. John Dickie, solicitor, Dumfries, and defenders by Mr. J. A. Will, w.s., Dumfries.

A joint minute of admissions for the parties had been lodged, which stated that Article 2 of the Animals (Notification of Disease) Order of 1919 made by the Ministry of Agriculture and Fisheries provides that a veterinary surgeon who, in his private practice, is employed to examine any of certain animals or their carcasses and is of opinion that the animal is diseased, or was diseased when it died or was slaughtered, or suspects the existence of disease therein, shall with all practicable speed give notice of the existence or suspected existence of the disease to an inspector of the Local Authority and also in the case of certain diseases to a constable of the police force for the area. Article 3 of the Tuberculosis Order of 1925 similarly provides that a veterinary surgeon who, in his private practice, is employed to examine any bovine animal and is of opinion that such animal is suffering from tuberculosis, shall with all practical speed give notice of the existence or suspected existence of the disease to an inspector of the Local Authority. Article 4 (1) of the former Order and Article 3 (2) of the latter Order provide that, in respect of each such notice given to an inspector of the Local Authority, the veterinary surgeon giving the notice shall be entitled to receive from the Local Authority a fee of 2s. 6d.

On December 31st, 1926, the defenders addressed to the complainer a letter, together with a book of forms. The account sued for represents the fee of 2s. 6d. claimed by the complainer in respect of his having made notifications of disease as provided for in the Orders, that the notifications were made in practically every case verbally to Charles Morrison, inspector of police, Annan, and that, where not made verbally to the police inspector, were made verbally or by telephone to Mr. Francis A. Davidson or Mr. George A. Sangster, county veterinary inspectors.

The Sheriff heard the agents in the case, Mr. Dickie arguing that no written notice was necessary.

The Sheriff granted decree for pursuer, with expenses against the County Council.—*Dumfries Standard.*

## Correspondence.

Letters to the Editor should reach the Office not later than by the first post on Tuesday morning for insertion in following Saturday's issue.

All correspondence must bear the name and address of the contributor for publication.

The Editor does not hold himself responsible for the opinions of his correspondents.

### Motor Car Insurance.

To the Editor of the Veterinary Record.

Sir,—Like most practitioners, I drive a car, which I had insured with a "Tariff Company" (The Royal) against third party risks—paying an extra premium because it might not be solely "owner driven."

Recently, however, I happened to be ill and my locum was using it *on business* when he had a minor accident—a cracked windscreen. I notified the Company and stated on the claim-form that it was being driven on business—but they refused to pay. Had it been driven on pleasure (with my consent) they would meet any claim—but on business, no; it immediately came under the "Commercial

Traveller " class, with an extra premium of £6.

The sore point, however, is this :—

The ordinary " second-driver " policy taken out by a member of the (human) medical profession allows his assistant or locum to drive it on business without extra premium ! But this does not apply to veterinary surgeons. The Royal Company tell me this, and I have also been so informed by the Commercial Union Insurance Company. True, they might " *ex gratia* " endorse a policy, but the " business driven " thing is not automatically covered, as it is in the case of the sister profession.

I discussed the matter with Mr. Tudor Hughes, of Oswestry, and he said he thought it was a matter of interest to the profession as a whole and that the " National " might be able to get things altered by the Tariff Offices if the profession as a body pressed it, and I believe the B.M.A. cleared this point up some time ago on behalf of their members.

If you deem the matter of general interest I will be only too pleased to furnish other details.

Yours faithfully,
J. Gerald Hoban.

[Correspondence which has passed between the "National" and the Accident Offices Association, indicating the steps already taken by the N.V.M.A. in this matter, was published in last week's *Record*.—Ed.]

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### The Liess Embryotome.

To the Editor of The Veterinary Record.

Sir,—With reference to Mr. W. J. Cooper's clinical article, which appeared last week in the *Record*, I should like to inform him and any others interested that the Liess embryotome mentioned in the abstract quoted by him (*V.R.*, 1930, No. 19) fulfills all the suggested requirements. It is difficult to prevent two wires becoming entangled inside one tube, but as the two tubes of the Liess instrument can be used quite free from the clamp that ordinarily holds them together, and as the expanded ends of the tubes are much more slender than those of the Thygesen (Danish) instrument, very little working space is required and also one can, by manipulation, obtain more control of the cutting wire loop with two tubes than if the loop were to emerge from a single one.

A well-illustrated article on the possibilities of employment of the Liess instrument appeared in the special publication to commemorate the Jubilee festival of the Hanover Veterinary School in 1928.

Amongst other uses, this instrument can be employed to cut in a forward direction. The instrument is patented in Germany and made by Houptner.

Yours faithfully,
J. T. Edwards.

Veterinary Laboratory, New Haw, Weybridge.
*June 23rd*, 1930.

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### R.C.V.S. Council Election.

To the Editor of The Veterinary Record.

Sir,—I desire heartily to thank each and all of those 463 members who so kindly voted on my behalf in the recent election to Council, R.C.V.S. Although not quite successful in gaining a seat, I am none the less grateful to my supporters.

Yours faithfully,
Hamilton Kirk.

938 Finchley Road, Golders Green, N.W.11.
*June 23rd*, 1930.

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To the Editor of The Veterinary Record.

Sir,—I shall be grateful if you will kindly allow me to express through your columns my sincere thanks to all the members of the profession who recorded their votes in my favour at the recent R.C.V.S. Council Election.

Yours faithfully,
R. Simpson.

The Courts, Carlisle.
*June 21st*, 1930.

*The Editor acknowledges the receipt of the following* :—

Sixth Annual Report of the Veterinary Department, British Somaliland.

# Diseases of Animals Acts, 1894 to 1927.
## SUMMARY OF RETURNS.

| Period. | Anthrax. | | Foot-and-Mouth Disease. | | Glanders (including Farcy).§† | | Parasitic Mange.§ | | Sheep Scab. | Swine Fever. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Out-breaks con-firmed. | Animals attacked. | Out-breaks con-firmed. | Animals slaugh-tered as diseased or ex-posed to infection. | Out-breaks con-firmed. | Animals attacked. | Out-breaks reported by the Local Authori-ties. | Animals attacked. | Out-breaks con-firmed. | Out-breaks con-firmed. | Swine slaugh-tered. |
| | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. |
| Period 1 to 15 June, 1930 | 11 | 11 | — | — | — | — | 5 | 6 | 6 | 102 | 40 |
| Corresponding period in— | | | | | | | | | | | |
| 1929 ... | 19 | 21 | 3 | 91 | — | — | 6 | 18 | 4 | 147 | ! |
| 1928 ... | 16 | 17 | — | — | — | — | 8 | 11 | 4 | 107 | 66 |
| 1927 ... | 16 | 17 | — | — | — | — | 11 | 17 | 13 | 113 | 42 |
| Total 1 Jan. to 15 June, 1930 | 210 | 222 | — | — | — | — | 139 | 203 | 255 | 1,274 | 478 |
| Corresponding period in— | | | | | | | | | | | |
| 1929 ... | 233 | 264 | 23 | 1,895 | — | — | 135 | 276 | 324 | 877 | 474 |
| 1928 ... | 306 | 342 | 102 | 8,655 | — | — | 188 | 389 | 283 | 851 | 432 |
| 1927 ... | 245 | 300 | 23 | 2,172 | — | — | 218 | 379 | 349 | 796 | 322 |

Note.—The figures for the current year are approximate only.

† Including outbreaks in recently imported animals.

§ Excluding outbreaks in Army Horses.